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BIBLIOGRAPHICAL CATALOGUE OF THE DESCRIBED TRANSFORMATIONS OF NORTH AMERICAN COLEOPTERA.

BY WM. BEUTENMÜLLER.

(*Read by title November 21st, 1890.*)

The present catalogue was compiled by me in the spare time that was at my command during the past four years, and was originally intended for my own use and assistance in the study of the earlier stages of North American Coleoptera ; but seeing the imperfect condition of our knowledge, and the vast amount of work that is yet to be done in this neglected branch of entomology, I concluded to publish the results of my labor, to give those who may also be interested in the subject an idea of what work there has been done. It was my intention also to add notes and comments after the references so as to indicate their value, but lack of time prevented me from doing so. Yet I hope the catalogue, which must not be considered as being perfect, will be acceptable, until a better and more complete work can be substituted. I have searched for references in all the entomological publications of this country and Europe that were accessible to me, and I believe I have at least given the main facts that have been recorded on the earlier transformations of North American Coleoptera. In the arrangement and style of the catalogue I have followed Mr. Henry Edward's Bibliographical Catalogue of the described Transformations of N. American Lepidoptera (Bull. U. S. Nat. Mus. No. 35). When the words (quotes Horn, e. g.) occur after the name of the describer, it will be understood that the *text* of the description has been used, and when the words (after Packard, etc.) it signifies that the *figure* has been borrowed from this author. If the word (brief) is used it means that the reference is but a mere *notice* to a short description of the larva or pupa, etc., of the species.

JAN 20 1903

CICINDELLIDÆ.

AMBLYCHILA CYLINDRIFORMIS Say.

1845. Larva (brief). Leconte. Ann. Lyc. iv. 143 (as *Pasimachus*).
 1878. Larva (fig.). Horn. Trans. Am. Ent. Soc. vii. 29. pl. ii.
 1877. Larva (brief). Williston. Can. Ent. ix. 163.
 1878. Larva (fig.). Riley (Horn, Ms. in advance). 1st Rep. U. S. Ent. Com.
 316.
 1879. Larva. Schaupp (quotes Horn). Bull. Bk. Ent. Soc. ii. 3.
 1883. Larva (fig.). Schaupp. Bull. Bk. Ent. Soc. vi. 74.

OMUS DEJEANI Reiche.

1878. Larva (fig.). Horn. Trans. Am. Ent. Soc. vii. 31. pl. ii.
 1879. Larva. Schaupp (quotes Horn). Bull. Bk. Ent. Soc. ii. 3.
 1883. Larva (fig.). Schaupp. Bull. Bk. Ent. Soc. vi. 75.

TETRACHA CAROLINA Linn.

1878. Larva. Horn. Trans. Am. Ent. Soc. vii. 34.
 1879. Larva (brief). Schaupp (quotes Horn). Bull. Bk. Ent. Soc. ii. 3.
 1883. Larva (fig.). Schaupp (quotes Horn). Bull. Bk. Ent. Soc. vi. 79.

CICINDELA REPANDA Dej.

1878. Larva (fig.). Horn. Trans. Am. Ent. Soc. vii. 35. pl. ii. fig. 4.
 1879. Larva (brief). Schaupp (quotes Horn). Bull. Bk. Ent. Soc. ii. 9.
 1882. Pupa (fig.). Schaupp. Bull. Bk. Ent. Soc. v. 18.
 1883. Larva (fig.). Schaupp (quotes Horn). Bull. Bk. Ent. Soc. vi. 123.

CICINDELA SPLENDIDA Hentz.

1878. Larva (fig. only). Riley. 1st Rep. U. S. Ent. Com. 314 (1877).
 1885. Larva (fig. only). Riley. 4th Rep. U. S. Ent. Com. 95 (1883-85).

CARABIDÆ.

CALOSOMA CALIDUM Fabr.

1861. Larva (fig.). Rathvon. Rep. U. S. Dept. Agri. 59.
 1863. Larva (brief, fig.). Fitch. 9th Rep. Trans. N. Y. Agri. Soc. 816.
 1868. Larva (fig. only). Glover. Rep. U. S. Dept. Agri. 79.
 1874. Larva (fig. only). Le Baron. 4th Rep. Nox. & Ben. Ins. Ill. 42.
 1875. Larva (fig.). Riley. 8th Rep. Ins. Mo. 52.
 1876. Larva (fig. only). Thomas. 6th Rep. Nox. Ins. Ill. 89.
 1878. Larva (fig. only). Riley. 1st Rep. U. S. Ent. Com. 314 (1877).
 1878. Larva. Williams. Rep. Ent. Soc. Ont. 40.
 1879. Larva (brief). Schaupp. Bull. Bk. Ent. Soc. ii. 14.
 1879. Larva (fig. only). Comstock. Rep. U. S. Dept. Agri. pl. xi.
 1879. Larva (fig. only). Burkhaut. Rep. Bd. Agri. Penn. 35.
 1879. Larva (fig. only). Comstock. Cotton Insects. 175.
 1880. Larva (fig.). Packard. Guide. 431 (7th Ed.).
 1882. Larva, pupa (detailed). Schaupp. Bull. Bk. Ent. Soc. v. 33.
 1884. Larva (fig.). Cutting. 8th Rep. Bd. Agri. Vermont. 251.

CALOSOMA SCRUTATOR Fabr.

1855. Larva (detailed). Capuis et Candeze. Mem. Soc. Sc. Liege. viii. 571.
 1879. Larva (brief). Schaupp. Bull. Bk. Ent. Soc. ii. 14.

ELAPHRUS RIPARIUS Linn.

1867. Larva (fig.). Schiedte. Nat. Tidsskr. iv. 452. pl. xiii.

PATROBUS LONGICORNIS Say.

1881. Larva. Schaupp. Bull. Bk. Ent. Soc. iv. 56. fig. and v. 18.

ANOPHTHALMUS sp.

1874. Larva (brief). Packard. Am. Nat. viii. 563.
 1876. Larva, pupa (figs.). Packard. Am. Nat. x. 286.
 1881. Larva (fig., detailed). Hubbard. Am. Ent. iii. 81.
 1889. Larva, pupa (fig.). Packard. Mem. Nat. Acad. Sc. iv. 76.

These are supposed to be either *A. Tellkamfii*, or *Menetriesii*.

PTEROSTICHUS MUTUS Say.

1880. Larva (fig.). Schaupp. Bull. Bk. Ent. Soc. iii. 89.

PTEROSTICHUS LUCUBLANDUS Say.

1880. Larva (fig.). Schaupp. Bull. Bk. Ent. Soc. iii. 88.

AMARA OBESA Say.

1878. Larva, pupa (figs.). Riley. 1st. Rep. U. S. Ent. Com. 291, 292.

DICÆLUS DILATATUS Say.

1878. Larva (fig.). Schaupp. Bull. Bk. Ent. Soc. i. 1, 44.
 1879. Larva (brief, fig.). Schaupp. Bull. Bk. Ent. Soc. ii. 21.
 1882. Pupa (fig.). Schaupp. Bull. Bk. Ent. Soc. v. 18.

DICÆLUS POLITUS Dej.

1878. Larva, pupa (brief). Schaupp. Bull. Bk. Ent. Soc. i. 44, 72, and ii. 21 (1879).

DICÆLUS ELONGATUS Bon.

1878. Larva, pupa (brief). Schaupp. Bull. Bk. Ent. Soc. i. 43, 44, 72.
 1879. Larva (brief). Schaupp. Bull. Bk. Ent. Soc. ii. 21.

DICÆLUS COSTATUS Lec., or SPLENDIDUS Say.

1878. Larva. Horn. Trans. Am. Ent. Soc. i. 37. pl. ii. fig. 5.
 1879. Larva (brief.) Schaupp (quotes Horn). Bull. Bk. Ent. Soc. ii. 14.

BADISTER BIPUSTULATUS Fabr.

1872. Larva (fig.). Schiedte. Naturh. Tidsskr. viii. pls. i, iii.

PRISTONYCHUS TERRICOLA Hbst.

1855. Larva (fig.). Chapuis et Candeze. Mem. Soc. Liege. viii. 376.

PLATYNUS EXTENSICOLLIS Say.

1880. Larva (fig.). Schaupp. Bull. Bk. Ent. Soc. iii. 91.

GALERITA LECONTEI Dej.

1848. Larva, pupa (fig.). Salle. Ann. Soc. Ent. Fr. 298.
 1855. Larva. Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 367.
 1879. Larva (brief). Schaupp. Bull. Bk. Ent. Soc. ii. 14.
 1880. Larva, pupa (figs). Packard. Guide. 433.
 1880. Larva (fig.). Anony. Am. Ent. iii. 153.

GALERITA JANUS Fabr.

1871. Larva (fig.). Packard. 1st. Ann. Rep. Inj. & Ben. Ins. Mass. 28-30, also reproduced in Guide. 713.
 1875. Larva. Hubbard. Psyche. i. 48.
 1879. Larva (brief). Schaupp. Bull. Bk. Ent. Soc. ii. 14.
 1882. Pupa (fig.). Schaupp. Bull. Bk. Ent. Soc. v. 18.

CHLÆNIUS LATICOLLIS Say.

1880. Larva (fig.). Schaupp. Bull. Bk. Ent. Soc. iii. 17.
 1882. Pupa (fig.). Schaupp. Bull. Bk. Ent. Soc. v. 18.

CHÆNIUS LEUCOSCELIS Chev.

1880. Larva (fig.). Schaupp. Bull. Bk. Ent. Soc. iii. 25, 26.

HARPALUS HERBIVAGUS Say?

1876. Larva. Riley. 9th Rep. Inj. Ins. Mo. 97.
 1878. Larva (fig.). Riley. 1st. Rep. U. S. Ent. Com. 290 (1877).

HARPALUS. (?) sp. (?)

1869. Larva (fig. only). Packard (quotes Walsh). Guide. 434.
 1874. Larva (fig. only). Le Baron (quotes Walsh). 4th Rep. Nox. & Ben. Ins. Ill. 47.
 1876. Larva (fig.). Riley. 9th Rep. Nox. & Ben. Ins. Mo. 97.
 1878. Larva (fig. only). Williams. Rep. Ent. Soc. Ont. 42.
 1878. Larva (fig. only). Riley. 1st Rep. U. S. Ent. Com. 292.
 1883. Larva (fig. only). Saunders. Ins. Inj. Fruit. 185 (as *H. Pennsylvanicus*).
 1884. Larva (fig. only). Edge. Rep. Agri. Penn. 102 (as *H. Pennsylvanicus*).

HARPALUS CALIGINOSUS Fabr. (?)

1879. Larva (fig. only). Comstock. Cotton Ins. 175.
 1884. Larva (fig. only). Edge. Rep. Agri. Penn. 102 (as *H. Pennsylvanicus*).

HALIPLIDÆ.

HALIPLUS RUFICOLLIS De G.

1864. Larva (fig.). Schiœdte. Nat. Tidsskr. iii. 161-164.

DYTISCIDÆ.

DYTISCUS MARGINALIS Linn.

1634. Larva. Mouffet. Ins. Min. Animal. Theatr. 320.
 1685. Larva (fig.). Swammerdam. Bibl. Nat. pl. xxix.
 1749. Larva, pupa (fig.). Roesel. Insect. Belust. i. 1-8. pl. i.
 1758. Larva (fig., brief). Hill. Book of Nat. Hist. Ins. pl. xxix.
 1774. Larva. De Geer. Mem. iv. m. 8.
 1804. Larva, pupa (fig.). Latreille. Nat. Hist. Ins. & Crust. 70. pl. lxx.
 1806. Larva. Clairville. Ent. Helvet. ii. 204.
 1806. Larva (fig., brief). Shaw. General Zoo. 97. pl. xxxiii.
 1823. Larva, pupa. Latreille (quotes Roesel). Regne Anim. 284, 285 (1817).
 1826. Larva (fig.). Kirby & Spence (quote Roesel). Intro. Ent. iii. pl. xiii.
 1832. Larva, pupa (figs.). Lyonet. Recherches. 108. pl. xi (1760).
 1832. Larva. Erichson. Gen. Dytis. 14.
 1834. Larva, pupa (fig.). Sturm (quotes Roesel). Ins. Deutsch. viii. 11.
 pl. clxxxvi.
 1835. Larva, pupa (figs.). Audouin et Brulle. Nat. Ins. v. 194 pl.
 1835. Larva (fig. only). Duncan. Nat. Library. ii. 136.
 1836. Larva. Curtis. Trans. Ent. Soc. Lond. i. 86.
 1836. Larva (fig.). Heer (quotes Roesel). Obs. Ent. pl. iii.
 1839. Egg, larva, pupa (figs.). Westwood (quotes various authors). Int.
 Ins. i. 99-101.
 1841. Larva, pupa (figs.). Jones. Anim. Kingd. 245.
 1842. Larva (fig., brief). Anony. Rudiments of Zoology. 235.
 1855. Larva (fig. only). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii.
 383. pl. i.
 1864. Larva, pupa (figs.). Schioedte. Nat. Tidsskr. iii. 182. pl. iii.
 1865. Egg, larva, pupa (brief, figs.). Houghton. Intellect. Obs. vi. 422.
 1870. Larva. v. Fricken. Nat. and Off. xvi. 474.
 1872. Larva, pupa (figs., brief). Figuiet. Insect World. 479.
 1874. Larva, pupa (figs. only). Le Baron. 4th Rep. Nox. Ins. Ill. 40.

CYBISTER FIMBRIOLATUS Say.

1885. Larva, pupa (figs.). Duges. Ann. Ent. Soc. Belg. xxix. 27. pl. ii.

HYDROPHILIDÆ.

HELOPHORUS GRANULARIS Mots.

1862. Larva, pupa (figs.). Schioedte. Nat. Tidsskr. iii. 1. 213. pl. vii.

HYDROPHILUS NIMBATUS Say.

1884. Larva, pupa (figs.). Duges (as *H. lateralis*). Ann. Ent. Soc. Belg.
 xxviii. 7. pl. i.

HYDROPHILUS TRIANGULARIS Say.

1881. Egg, larva (figs.). Garman. Am. Nat. xv. 661.

HYDROCHARIS OBTUSATUS Say.

1884. Egg-case (fig.), young larva. Bowditch. Journ. Bost. Zoo. Soc.
 iii. 1-6.

SPHÆRIDIMUM SCARABÆOIDES Linn.

1862. Larva, pupa (figs.). Schiøedte Nat. Tidsskr. iii. 1. 221. pl. vi.

CERCYON ANALE Payk.

1862. Larva, pupa (figs.). Schiøedte. Nat. Tidsskr. iii. 1. 219. pl. vi.

PLATYPSYLLIDÆ.

PLATYPSYLLA CASTORIS Rit.

1888. Larva (fig.). Horn. Trans. Am. Ent. Soc. xv. 23. pl. iii.

1888. Larva (figs.). Riley. Scient. Am. Supp. June.

1889. Larva (brief). Horn. Pro. Ent. Soc. Wash. i. 144 (1888).

1889. Larva (figs.). Riley. Insect Life. i. 300-307.

1890. Larva (figs.). Riley. Ent. Am. vi. 27-30.

1890. Larva (fig.). Riley. Insect Life. ii. 244-246.

1890. Larva. Horn. Ent. Am. vi. 55.

SILPHIDÆ.

NECROPHORUS TOMENTOSUS Web.

1861. Larva (fig., brief). Rathvon. Rep. U. S. Dept. Agri. 594.

1881. Larva (fig., detailed). Schaupp. Bull. Bk. Ent. Soc. iv. 37, 38.

SILPHA INÆQUALIS Fabr.

Larva, pupa (figs.). Riley.

1874. Larva, pupa (figs., brief). LeBaron (quotes Riley). 4th Rep. Nox. Ins. Ill. 57.

SILPHA AMERICANA Linn.

1861. Larva (fig., brief). Rathvon. Rep. U. S. Dept. Agri. 595.

1882. Larva (fig., detailed). Schaupp. Bull. Bk. Ent. Soc. v. 2. pl. 18.

SILPHA RAMOSA Say.

1880. Egg, larva (figs.). Gissler. Am. Ent. iii. 265.

SILPHA LAPPONICA Hbst.

1869. Larva (figs. only). Packard. Guide. 439 (and other editions).

SILPHA OPACA Linn.

1846. Larva. Guerin. Ann. Ent. Soc. Fr. iv. 2 Ser. Bull. 72.

1852. Larva. Fairmaire. Ann. Soc. Ent. Fr. 2 Ser.

ADELOPS HIRTUS Tellk.

1874. Larva (brief). Packard. Am. Nat. viii. 563.

1876. Larva (fig only) Packard. Am. Nat. x. 286.

1880. Larva, pupa (figs., detailed). Hubbard. Am. Ent. iii. 80.

1889. Larva, pupa (figs.). Packard (quotes Hubbard in part). Mem. Nat. Acad. Sc. iv. 78.

STAPHYLINIDÆ.

QUEDIUS FULGIDUS Fabr.

1834. Larva (fig). Bouche. Nat. Ins. 180, 181. pl. viii.
 1858. Larva. Kraatz (quotes Bouche). Nat. Ins. Deutsch. ii. 488.
 1864. Larva (fig.). Schiœdte, iii. 205. pl. x.

LISTOTROPHUS CINGULATUS Grav.

1879. Larva (brief). Schaupp. Bull. Bk. Ent. Soc. ii. 30.
 1881. Larva (detailed). Schaupp. Bull. Bk. Ent. Soc. iv. 9, 10.

STAPHYLINUS MACULOSUS Grav.

1861. Larva (fig., brief). Rathvon. Rep. U. S. Dept. Agri. 596.
 1878. Larva (fig., detailed). Schaupp. Bull. Bk. Ent. Soc. i. 42, 71.
 1879. Larva pupa (brief). Schaupp. Bull. Bk. Ent. Soc. ii. 30.

STAPHYLINUS VULPINUS Nordm.

1880. Larva (fig.). Schaupp. Bull. Bk. Ent. Soc. iii. 92.

STAPHYLINUS ERYTHROPTERUS Linn.

1724. Larva, pupa (figs.). Frisch. Beschreib. Ins. v. 50. pl. xxvi.

PHILONTHUS ÆNEUS Rossi.

1834. Larva (fig.). Bouche. Nat. Ins. 199. pl. vii.
 1839. Larva (fig.). Westwood. Zoo. Journ. iii. 58, 59.
 1858. Larva. Kraatz (quotes Bouche). Nat. Ins. Deutsch. ii. 567.
 1864. Pupa (fig.). Schiœdte. Nat. Tidsskr. iii. 206. pl. xii.

PHILONTHUS SORDIDUS Grav.

1876. Larva. Mulsant. Hist. Nat. Brevip. 384.

XANTHOLINUS PUNCTULATUS Payk.

1834. Larva (fig.). Bouche. Nat. Ins. 181. pl. viii.
 1858. Larva. Kraatz (quotes Bouche). Nat. Ins. Deutsch. ii. 631.

LEPTACINUS BATYCHRUS Gyll.

1876. Larva. Mulsant. Hist. Nat. Brevip. 324.

STENUS BIPUNCTATUS Er.

1873. Larva (fig.). Schiœdte. Nat. Tidsskr. viii. 548. pl. xviii.

TACHYPORUS CHRYSOMELINUS Linn.

1873. Larva (fig.). Schiœdte. Nat. Tidsskr. viii. 557. pl. xix.

OXYTELUS SCULPTUS Grav.

1855. Larva (fig.). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 400.
 1858. Larva. Kraatz (quotes Chapuis et Candeze). Nat. Ins. Deutsch. ii. 849.

ACIDOTA CRENATA Fabr.

1877. Larva, pupa (brief). Beling. Wieg. Archiv. 43. i. 50.

UNKNOWN SPECIES.

1876. Larva (fig). Packard. Am. Nat. x. 286. pl. ii. fig. 9.
 1889. Larva (fig.). Packard. Mem. Nat. Ac. Sc. iv. 80.

TRICHOPTERYGID.E.

TRICHOPTERYX FASCICULARIS Hbst.

1846. Larva, pupa (figs.). Perris. Ann. Soc. Ent. Fr. ii. 4, 465. pl. xi.
 1847. Larva, pupa. Allibert (quotes Perris). Revue Zoo. 190.
 1855. Larva (fig). Chapuis et Candeze (quote Perris). Mem. Soc. Sc. Liege, viii. 408.

PHALACRID.E.

OLIBRUS BICOLOR Gyll.

1857. Larva, pupa (figs.). Heeger. Sitzb. Ak. Wiss. Wien. xxiv. 330-334. pl. vi.
 1867. Larva, pupa (brief). Kawall. Stett Ent. Zeit. xxviii. 118.
 1874. Larva, pupa (brief). Kaltenbach. Pflanzen feinde. 349, 397.

COCCINELLID.E.

MEGILLA MACULATA Deg.

1888. Larva, pupa (figs.). Lintner. 4th Rep. Nox. Ins. N. Y. 83.

HIPPODAMIA AMBIGUA Lec.

1882. Larva, pupa (figs.). Riley. Rep. U. S. Dept. Agri. 206. pl. xviii.
 1883. Larva, pupa (figs.). Saunders. Ins. Inj. Fruit. 416.
 1884. Larva, pupa (figs.). Cutting. 8th Rep. Vermont Agri. 257.

HIPPODAMIA 13-PUNCTATA Linn.

1889. Pupa (fig.). Weed. Bull. Ohio Exp. St. i. 13.

HIPPODAMIA PARENTHESIS Say.

1860. Egg, pupa. Fitch. 6th Rep. Nox. Ins. N. Y. 851, 852.

HIPPODAMIA CONVERGENS Guér.

1868. Larva, pupa (figs., brief). Walsh & Riley. Am. Ent. i. 46, 143.
 1869. Larva, pupa (figs. only). Packard. Guide. 511 (as *H 13-punctata*).
 1870. Larva, pupa (figs., brief). Riley. Am. Ent. ii. 309.
 1870. Larva, pupa (figs.). Shimer. Am. Nat. iii. 94.
 1873. Larva, pupa (figs. only). Riley. 6th Rep. Nox. Ins. Mo. 51.
 1874. Larva, pupa (figs. only). Rogers. Can. Ent. vi. 84.
 1874. Larva, pupa (figs. only). LeBaron. 4th. Rep. Nox. Ins. Ill. 94.
 1876. Larva, pupa (figs. only). Thomas. 1st. Rep. Nox. Ins. Ill. 173.
 1877. Larva, pupa (figs. only). Packard. Half Hours Ins. 38.
 1877. Larva, pupa (figs. only). Saunders. Rep. Ent. Soc. Ont. 36.
 1878. Larva, pupa (figs. only). Thomas. 8th Rep. Nox. Ins. Ill. 173.
 1879. Larva, pupa (figs. only). Comstock. Rep. U. S. Dept. Agri. pl. xii.

1879. Larva, pupa (figs. only). Comstock. Cotton Ins. 177.
 1880. Larva, pupa (fig. only). Packard. Guide, 511.
 1880. Larva, pupa (figs. only). Riley. Bull. No. 3. U. S. Ent. Com. 35.
 1883. Larva, pupa (figs. only). Saunders. Ins. Inj. Fruit. 125.
 1884. Larva, pupa (figs. only). Cutting. 8th Rep. Vermont Agri. 253.
 1885. Larva, pupa (figs. only): Hubbard. Ins. Aff. Orange. 72, 73.
 1885. Larva (fig. only). Riley. 4th Rep. U. S. Ent. Com. 96.

COCCINELLA 9-NOTATA Hbst.

1860. Larva, pupa. Fitch. 6th Rep. Nox. Ins. N. Y. 842-846.
 1862. Larva, pupa (fig.). Harris. Inj. Ins. Mass. 246.
 1862. Larva, pupa (figs.). Sanborn. 10th Rep. Mass. Bd. Agri. 145.
 1869. Pupa (fig. only.). Packard. Guide. 512 (and other editions).
 1870. Pupa (fig. only.). Shimer. Am. Nat. iii. 94.
 1877. Pupa (fig. only.). Packard. Half Hours. Ins. 209.
 1877. Larva (fig. only.). Saunders. Rep. Ent. Soc. Ont. 30.
 1878. Larva (fig. only.). Williams. Rep. Ent. Soc. Ont. 43.
 1879. Pupa (fig. only.). Comstock. Cotton Ins. 176.
 1879. Pupa (fig. only.). Comstock. Rep. U. S. Dept. Agri. pl. xii.

COCCINELLA SANGUINEA Linn.

1882. Pupa (fig.). Riley. Rep. U. S. Dept. Agri. 205. pl. xviii. fig. 4.
 1883. Pupa (fig., brief.). Saunders. Ins. Inj. Fruit. 415.
 1884. Pupa (fig. only). Cutting. 8th Rep. Vermont Agri. 256.
 1885. Larva, pupa (figs.). Hubbard. Ins. Aff. Orange. 73.

COCCINELLA ABDOMINALIS Say.

1882. Larva, pupa (figs.). Riley. Rep. U. S. Dept. Agri. 203. pl. xviii.
 1883. Larva, pupa (figs., brief). Saunders. Ins. Inj. Fruit. 431.
 1884. Larva, pupa (figs. only). Cutting. 8th Rep. Vermont Agri. 256.
 1886. Larva, pupa (figs.). Duges. Ann. Ent. Soc. Belg. xxx. 38. pl. iii.

ADALIA BIPUNCTATA Linn.

1720. Larva, pupa (figs.). Frisch. Beschreib. Ins. pt. 9. 33. pl. xvi.
 1762. Larva. Geoffroy. Hist. Ins. i. 320.
 1775. Larva. DeGeer. Mem. v. 427.
 1839. Larva (fig.). Westwood. Intro. Ins. i. 396.
 1846. Larva. Mulsant. Hist. Nat. Col. Fr. 60.
 1858. Larva, pupa (fig.). Letzner. Verw. der Coccinellen. 4.
 1869. Egg, larva, pupa (brief.). Packard. Guide. 511, 512.
 1874. Larva, pupa. Rogers. Can. Ent. vi. 83.
 1878. Egg, larva, pupa. Williams (quotes Packard). Rep. Ent. Soc. Ont.

44.

VEDOLIA CARDINALIS.

1889. Egg, larva, pupa (figs.). Coquillett. Insect Life. ii. 70.

HARMONIA PICTA Rand.

1873. Larva, pupa (figs.). Riley. 5th Rep. Nox. Ins. Mo. 101.
 1878. Larva (brief). Thomas, 6th Rep. Nox. Ins. Ill. 174.

1883. Larva (brief). Saunders. Rep. Ent. Soc. Ont. 56.
 1883. Larva (fig., brief). Saunders. Ins. Inj. Fruit. 125.
 1885. Larva (fig.). Lintner. 2nd Rep. Inj. Ins. N. Y. 186.

MYSIA 15-PUNCTATA Oliv.

1869. Larva, pupa. Packard. Guide. 512 (and other editions).
 1871. Larva, pupa (figs. only). Reed. Can. Ent. iii. 170.
 1872. Larva, pupa (figs.). Riley. 4th Rep. Nox. Ins. Mo. 18.
 1874. Larva (brief). Rogers. Can. Ent. vi. 85.
 1877. Larva, pupa (figs. only). Saunders. Rep. Ent. Soc. Ont. 36.
 1878. Larva, pupa (figs. only). Williams. Rep. Ent. Soc. Ont. 43.
 1882. Larva, pupa (figs.). Harrington. Rep. Ent. Soc. Ont. 57.
 1883. Larva, pupa (figs., brief). Saunders. Ins. Inj. Fruit. 130.
 1887. Larva, pupa (figs. only). Fletcher. Rep. Ent. Exp. Farms. 28.

PSYLOBORA 20—MACULATA Say.

1872. Larva, pupa (fig.). Packard. 3d Rep. Inj. Ins. Mass.
 263.
 1889. Larva, pupa (figs.). Weed. Bull. Ohio Agri. Exp. St. i. 3, 4, pl. i.

CHILOCORUS BIVULNERUS Muls.

1858. Larva, pupa (brief). Glover. Rep. U. S. Pat. Office (Agri.). 261.
 1863. Larva, pupa (brief). Glover. U. S. Pat. Office (Agri.). 579.
 1868. Larva (fig. only). Walsh, Riley. Am. Ent. i. 39.
 1876. Larva (brief). Thomas. 1st. Rep. Inj. Ins. Ill. 174.
 1877. Larva (fig., brief). Smith. 7th Rep. Inj. Ins. Ill. 128.
 1877. Larva (fig. only). Saunders. Rep. Ent. Soc. Ont. 36.
 1878. Larva (fig. only). Thomas. 8th Rep. Inj. Ins. Ill. 174.
 1883. Larva (fig. only). Saunders. Rep. Ent. Soc. Ont. 56.
 1883. Larva (fig., brief). Saunders. Ins. Inj. Fruit. 43.
 1885. Larva (fig. only). Lintner. 2d Rep. Ins. N. Y. 186.
 1885. Larva, pupa (figs.). Hubbard. Ins. Aff. Orange. 71, 72.

CHILOCORUS CACTI Linn.

1839. Larva (fig., brief). Westwood. Intro. Ins. i. 397.
 1882. Larva, pupa (figs.). Riley. Rep. U. S. Dept. Agri. 205, pl. xviii.
 1883. Larva, pupa (figs., brief). Saunders. Ins. Inj. Fruit. 415.
 1884. Larva, pupa (figs. only). Cutting. 8th Rep. Vermont Agri. 257.

EXOCHOMUS CONTRISTATUS Muls.

1859. Larva, pupa (brief). Glover. U. S. Pat. Office. Rep. (Agri.) 261.
 (1858). (as *E. Guexi*).
 1885. Larva, pupa (figs.). Hubbard. Ins. Aff. Orange. 72.

SCYMNUS CERVICALIS Muls.

1869. Larva (brief). Packard. Guide. 513.

SCYMNUS ARCUATUS Rossi.

1857. Larva, pupa (figs.). Heeger. Sitzb. Ak. Wiss. Wien. xxiv. 326-329.
 pl. v.

EPILACHNA BOREALIS Fabr.

1862. Larva (brief). O. Sacken. Proc. Ent. Soc. Phil. i. 125.
 1867. Larva (fig. only). Walsh. Pract. Ent. ii. 42.
 1869. Larva, pupa (brief). Packard (quotes O. Sacken). Guide. 513.
 1883. Life History. French. Can. Ent. xv. 189.

EPILACHNA MEXICANA Guér.

1886. Larva, pupa (figs.). Duges. Ann. Ent. Soc. Belg. xxx. 40. pl. iii.

ENDOMYCHIDÆ.

MYCETÆA HIRTA Marsh.

1839. Pupa (fig.). Westwood. Intro. Ins. i. 154.
 1849. Larva, pupa (figs.). Blisson. Ann. Soc. Ent. Fr. ii. 7. 315-325. pl. ix.
 1863. Larva, pupa. Perris (quotes Blisson). Hist. Pin. Mar. i. 113-116.

APHORISTA VITTATA Fabr.

1886. Larva, pupa (figs.). Smith. Ent. Am. ii. 85.

EROTYLIDÆ.

LANGURIA MOZARDI Lat.

1879. Egg, larva, pupa (figs.). Comstock. Rep. U. S. Dept. Agri. 199, 200. pl. i.
 1881. Egg, larva, pupa (figs.). Lintner (quotes Comstock). Trans. N. Y. Agri. Soc. 18 (1880).
 1881. Egg, larva, pupa (figs.). Saunders (quotes Comstock). Rep. Ent. Soc. Ont. 44.
 1887. Egg, larva, pupa (figs.). Cook (quotes Comstock). Beal's Grasses N. Am. i. 378-380.
 1888. Egg, larva, pupa (figs.). Webster (quotes Comstock). Ins. Life. i. 19.

LANGURIA PUNCTICOLLIS Say.

1873. Larva, pupa (figs.). Packard. 3rd Rep. Inj. Ins. Mass. 23, 24.
 1873. Larva, pupa (figs.). Packard. Am. Nat. vii. 544.

MEGALODACNE HEROS Fabr.

1873. Larva, pupa (figs., brief). Packard. 3rd Rep. Inj. Ins. Mass. 24.
 1873. Larva, pupa (figs.). Packard. Am. Nat. vii. 545.

MEGALODACNE FASCIATA Fabr.

1890. Larva. Beutenmüller. Psyche. v. 318

MEGALODACNE ULKEI Cr.

1878. Larva, pupa (brief). Dury. Can. Ent. x. 210.

ISCHYRUS 4-PUNCTATUS Oliv.

1855. Larva (fig.). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 22. pl.

EROTYLUS BOISDUVALI Chev.

1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Inj. Ins. Ill. 180.

COLYDIIDÆ.

BOTHRIDERES GEMINATUS Say.

1878. Cocoon. Dury. Can. Ent. x. 210.

EROTYLATHRIS EXARATUS Melsh.

1878. Cocoon. Dury. Can. Ent. x. 210.

CUCUJIDÆ.

SILVANUS SURINAMENSIS Linn.

1839. Larva (fig.). Westwood. Intro. Ins. i. 154.
 1842. Larva. Erichson. Wiegem. Archiv. viii. 378.
 1846. Larva, pupa (figs.). Curtis. Journ. Roy. Agri. Soc. Eng. pl. 1. 103.
 1848. Larva. Erichson. Nat. Ins. Deutschl. iii. 337.
 1849. Larva, pupa (fig.). Blisson. Ann. Soc. Ent. Fr. ii. 7. 163-172.
 1849. Larva. Coquerel. Ann. Soc. Ent. Fr. ii. 7. 172.
 1854. Larva, pupa (figs.). Emmons. Ins. N. Y. 105.
 1869. Larva (brief). Packard. Guide. 446.

SILVANUS CASSIÆ Reiche.

1854. Larva (fig., brief). Glover. Rep. U. S. Pat. Off. (Agri) 66. pl. iv
 (as *S. quadricollis*).
 1868. Larva (fig. only). Glover. Rep. U. S. Dept. Agri. 84 (as *S. quadri-*
collis).

SILVANUS BIDENTATUS Fabr.

1868. Larva (habits). Glover. Rep. U. S. Dept. Agri. 84.

PROSTOMIS MANDIBULARIS Fabr.

1847. Larva. Erichson. Wiegem. Archiv. xiii. 1. 285.
 1854. Larva. Curtis. Trans. Ent. Soc. Lond. 2nd Ser. iii.
 1855. Larva. Chapuis et Candeze (quote Erichson). Mem. Soc. Sc. Liege.
 viii. 425.
 1876. Larva. Perris. Ann. Soc. Linn. Lyon. xxii.

CUCUJUS CLAVIPES Fabr.

1874. Larva (figs.). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 65.
 1878. Larva (brief). Wilson. Bull. Bk. Ent. Soc. i. 56.
 1886. Larva (brief). Hamilton. Can. Ent. xviii. 27.

LÆMOPHLEUS FERRUGINEUS Steph.

1877. Larva. Carpentier. Bull. Soc. Linn. Nord. Fr. Apr. iii. 239.
 1877. Larva. Perris. Larves des Coleopt. 575.

CRYPTOPHAGIDÆ.

ANTHEROPHAGUS OCHRACEUS Melsh.

1869. Larva (fig. only). Packard. Guide. 447.

CRYPTOPHAGUS CELLARIS Scop.

1839. Larva (fig.). Westwood. Intro. Ins. i. 148.

1850. Larva, pupa (figs.). Newport. Trans. Linn. Soc. Lond. xx. 351, pl. xxxiv.

DERMESTIDÆ.

BYTURUS UNICOLOR Say.

1870. Larva. Fitch. 14th Rep. Nox. Ins. N. Y. 357 (Trans. N. Y. State Agri. Soc.).

DERMESTES VULPINUS Fabr.

1885. Egg, larva, pupa (figs.). Riley. Rep. U. S. Dept. Agri. 258-264.

1888. Egg, larva, pupa (figs.). Lintner. 4th Rep. Nox. Ins. N. Y. 89.

1889. Egg, larva, pupa (figs.). Jones. Ins. Life. ii. 63.

DERMESTES LARDARIUS Linn.

1667. Larva. Gœdart. Metam. Hist. Nat. Insect.

1688. Larva (fig.). Blankaart. Schow-Burg. der Ruspen. etc. 95. pl. xi.

1700. Larva. Gœdart. Met. Hist. Nat. ii. 172. exper. 41.

1720. Larva (fig.). Frisch. Beschreib. all. Ins. pt. 1. 35. pl. x.

1774. Larva, pupa (figs.). De Geer. Mem. iv. Mem. v. 194. pl. vii. figs. 1-9.

1774. Larva. Meineckens. Naturforscher. iii. 55.

1779. Larva. Meineckens. Füssly. Mag. Liebh. Ent. ii. 126.

1792. Larva (brief). Petagne. Instit. Ent. i. 157.

1792. Larva, pupa (figs.). Herbst. Naturg. all. bek. Ins. iv. 118. pl. G.

1804. Larva, pupa. Latreille. Nat. Hist. Ins. & Crust. ix. 238.

1806. Larva (fig. only). Shaw. Gen. Zoo. Ins. 31. pl. vii.

1823. Larva. Latreille. Regne Anim. iii. 362 (1817).

1832. Larva, pupa (figs.). Lyonet. Recherches. 115. pl. xi. figs. 9-13.

1835. Larva. Audouin et Brulle. Hist. Nat. Ins. v. Col. ii. 369.

1837. Larva. Kollar. Nat. Ins. 406.

1839. Larva, pupa (figs.). Westwood. Intro. Ins. i. 158.

1847. Larva (fig.), Sturm. Deutschl. Insect. xix. 65.

1861. Larva, pupa (figs.). Rathvon. Rep. U. S. Dept. Agri. 596.

1867. Larva, pupa (figs.). Mulsant. Hist. Nat. Col. Fr. Scuticollis. pl.

1868. Larva. Healy. Entomologist. vi. 69.

1869. Larva (brief). Walsh & Riley. Am. Nat. ii. 443.

1870. Larva (brief, fig.). Riley. Am. Ent. ii. 308.

1872. Larva, pupa (figs.). Figuier. Ins. World. 475.

1872. Larva. Girard. Ann. Soc. Ent. Fr. v. 2. 302.

1873. Larva (fig., brief). Saunders. Can. Ent. v. 171.

1874. Larva (fig. only). Riley. 6th Rep. Nox. Ins. Ill. 100.

1874. Larva (fig. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 60.

1874. Larva (fig.). Williams. Rep. Ent. Soc. Ont. 26.

1876. Larva (fig. only). Thomas. 1st Rep. Nox. Ins. Ill. 92.
 1878. Larva (fig. only). Heustes. Rep. Ent. Soc. Ont. 18.
 1878. Larva (fig.). Perkins 5th Rep. Vermont Bd. Agri. 266.
 1890. Larva (fig.). Lintner. 6th Rep. Inj. Ins. N. Y. 119-123.

ATTAGENUS PELLIO Linn.

1724. Larva (fig.). Frisch. Beschreib. Ins. v. 23, 24. pl. viii. figs. 1-5.
 1774. Larva. De Geer. Mem. iv. mem. v. 199.
 1779. Larva. Meinecke. Füssly Mag. Liebh. Ent. ii 126.
 1784. Larva. Harrer. Beschreib. Ins. i. 37.
 1792. Larva (brief). Petagne. Instit. Ent. i. 157.
 1823. Larva. Latreille. Regne Anim. iii 362 (1817).
 1835. Larva. Audouin et Brulle. Hist Ins. v. 368.
 1839. Larva (brief). Westwood. Int. Ins. i. 159.
 1847. Larva, pupa (figs.). Sturm. Deutschl. Insect. xix. 78.
 1848. Larva. Erichson. Nat. Ins. Deutschl. iii. 438.
 1855. Larva (fig. only). Chapuis et Candeeze. Mem. Soc. Sc. Liege. viii.
 441. pl. iii.
 1867. Pupa (fig.). Mulsant. Hist. Nat. Col. Fr. Scuticollis 10. pl. i.
 1869. Larva (brief). Packard. Guide. 397. fig.
 1871. Larva (brief). Bethune (quotes De Geer). Can. Ent. iii. 176.
 1872. Larva, pupa (figs.). Figuier. Insect World. 475.

ATTAGENUS PICEUS Oliv.

1847. Larva, pupa (figs.). Sturm. Ins. Deutschl. xix. 78. pl. cccliv.
 1861. Larva. Löw. Verh. z. b. Ges. Wien. ii. 293.

TROGODERMA TARSALE Melsh.

1882. Larva, pupa. Snow. Psyche. iii. 352.

TROGODERMA ORNATUM Say.

1883. Larva (brief). Hamilton. Can. Ent. xv. 91.
 1884. Larva (Biological notes). Hamilton. Can. Ent. xvi. 133.

ANTHRENUS SCROPHULARIÆ Linn.

1774. Larva (brief). De Geer. Mem. iv. M. v. 121.
 1792. Larva (brief). Petagne. Instit. Ent. i. 160.
 1797. Larva (brief). Herbst. Natur. System. vii. 328.
 1846. Larva (brief). Erichson. Nat. Ins. Deutschl. iii. 454.
 1867. Larva (fig.). Mulsant. Nat. Hist. Col. Fr. Scuticollis. pl. ii. fig. 4.
 1878. Larva, pupa (figs.). Lintner. Am. Nat. xii. 536.
 1878. Larva, pupa (figs.). Lintner. Inj. Ins. 7.
 1878. Larva, pupa (figs.). Saunders (quotes Lintner). Rep. Ent. Soc.
 Ont. 33.
 1879. Larva, pupa (figs.). Hagen. Rep. Ent. Soc. Ont. 31.
 1880. Larva, pupa (figs.). Anony. Am. Ent. iii. 53.
 1882. Larva, pupa (figs.). Lintner. 1st Rep. Inj. Ins. N. Y. 10.
 1889. Larva, pupa (figs.). Riley. Insect Life. ii. 127-136.

ANTHRENUS MUSÆORUM Linn.

1774. Larva, pupa (figs.). De Geer. Mem. iv. M. v. 305. pl. viii.
 1792. Larva (brief). Petagne. Instit. Ent. i. 157.
 1809. Larva (brief). Disderi. Mem. Ac. Sc. Turin. xv. 68.
 1816. Larva. Latreille. Nouv. Diet. ii. 161.
 1817. Larva, pupa (figs.). Sturm. Ins. Deutschl. ii. 125.
 1837. Larva (habits). Kollar. Nat. Schäd. Ins. 403.
 1839. Larva (fig.). Westwood. Intro. Ins. i. 160.
 1846. Larva. Erichson. Nat. Ins. Deutschl. iii. 458.
 1854. Larva, pupa. Letzner. Arb. Schles. Ges. Breslau. 82-84.
 1867. Larva. Lucas. Ann. Soc. Ent. Fr. iv. 7. Bull. 25.
 1869. Larva, pupa (figs. only). Walsh & Riley. Am. Nat. ii. 443.
 1883. Larva (fig. only). Calwer. Kaeferbuch. pl. xlix. fig. 7.

ANTHRENUS VARIUS Fabr.

1846. Larva. Erichson. Ins. Deutschl. iii. 455.
 1869. Larva, pupa (fig.). Packard. Guide. 449.

HISTERIDÆ.²

HISTER MERDARIUS Hoffm.

1811. Larva (fig.). Paykull. Monog. Hister. 22. pl. i. fig. 1.
 1835. Larva. Audouin et Brulle (quotes Paykull). Nat. Hist. Ins. iv. Col. II. 416.
 1839. Larva (fig.). Westwood (quotes Paykull). Intro. Ins. i. 182.
 1854. Larva, pupa (fig.). Marseul. Ann. Soc. Ent. Fr. iii. 2. 132.
 1863. Larva, pupa (fig.). Perris. Hist. Pin. Mar. Col. 132 (1854).

NITIDULIDÆ.

1841. Larvæ. Erichson. Ins. Deutschl. iii. 124.
 1869. Larvæ (brief). Packard. Guide. 444.

BRACHYPTERUS URTICÆ Fabr.

1876. Larva, pupa. Perris. Gobert. Catal. iii. 103.
 1877. Larva, pupa. Perris. Larves des Col. 37.

CARPOPHILUS HEMIPTERUS Linn.

1868. Larva (fig. only). Glover. Rep. U. S. Dept. Agri. fig. 31.
 1877. Larva (fig.), pupa. Perris. Larv. des Col. 45-47.

IPS FASCIATUS Oliv.

1869. Larva (fig. only). Packard. Guide. 444.
 1874. Larva (fig. only). Le Baron (after Packard). 4th Rep. Nox. Ins. III. 60.
 1876. Larva (fig. only). Thomas. 1st Rep. Nox. Ins. III. 91 (as *I. 4-signatus*).

LATHRIDIIDÆ.

LATHRIDUS MINUTUS Linn.

1855. Larva (fig.). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 433.
pl. ii. fig. 10.
1869. Larva (fig. only). Packard. Guide. 447.

TROGOSITIDÆ.

TENEBRIOIDES MAURITANICA Linn.

1787. Larva. Dorethes. Mem. Soc. Agri. Paris.
1797. Larva. Herbst. Natursystem. vii. 274.
1803. Larva. Latreille. Hist. Nat. Crust. & Ins. xi. 234.
1807. Larva. Sturm. Ins. Deutsch. ii. 245.
1832. Larva. Hammerschmidt. De Ins. Agri. damn. pl. ii.
1839. Larva (fig.). Westwood. Intro. Ins. i. 147.
1845. Larva. Erichson. Nat. Ins. Deutsch. iii. 244.
1846. Larva (fig.). Curtis. Journ. Roy. Agri. Soc. Eng. pl. i. 106.
1855. Larva. Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 415.
1863. Larva. Perris. Hist. Pin. Marit. i. 86 (1853).
1869. Larva. Glover. Rep. U. S. Dept. Agri. 83 (1868).
1877. Larva. Perris. Larv. des Col. 50.

TENEBRIOIDES OBSCURA Horn.

1889. Larva (fig.). Popenoe. The Industrialist. xiv. 153.

TENEBRIOIDES CORTICALIS Melsh.

1870. Larva (fig. only). Glover. Rep. U. S. Dept. Agri. 66.
1874. Larva (fig. only). Le Baron (after Riley). 4th Rep. Inj. Ins. Ill. 64.

THYMALUS FULGIDUS Er.

1890. Larva, pupa. Beutenmüller. Ent. Am. vi. 57.

PARNIDÆ.

PSEPHENUS LECONTEI Lec.

1844. Larva (fig.). DeKay. Zoo. New York. pt. vi. Crust. 53. pl. x
(as *Fluvicola Herricki*).
1850. Larva (brief). Leconte. Proc. Am. Ass. Adv. Sc. 272.
1850. Larva, pupa. Leconte. Agassiz. Lake Supérieur. 241.
1852. Larva (brief). Leconte. Pro. Ac. Sc. Phil. vi. 41.
1855. Larva, pupa. Chapuis et Candeze (quote LeConte). Mem. Soc. Sc.
Liege. viii. 495.
1869. Larva (fig.). Packard. Guide. 450.
1869. Larva (fig.). Harris. Harr. Corr. 226. pl. iii. fig. 7.
1874. Larva (fig.). Rolph. Wiegem. Archiv. xiv. pt. i. 16-22. pl. i.
1877. Larva (fig. only). Packard. Half Hours Ins. 215.
1880. Larva, pupa (brief). Hubbard. Am. Ent. iii. 73.
1883. Larva (figs.). Kellicott. Can. Ent. xv. 191.

HELICHUS LITHOPHILUS Germ. (?)

1841. Larva. Erichson. Wiegem. Archiv. 107. pt. 1.
 1883. Larva (fig. only). Kellicott. Can. Ent. xv. 192.

HELICHUS FASTIGIATUS Say.

1869. Larva (very brief). Leconte. Harr. Corr. 227.

STENELMIS CRENATUS Say.

1869. Larva (very brief). Leconte. Harr. Corr. 227.

DASCILLYDÆ.

PTILODACTYLA SERRICOLLIS Say.

1862. Larva (fig.). O. Sacken. Proc. Ent. Soc. Phil. i. 109. pl. i. fig. 3 (as *P. elaterina*).

PRIONOCYPHON DISCOIDEUS Say.

1862. Larva, pupa. O. Sacken. Proc. Ent. Soc. Ont. i. 115.
 1869. Larva, pupa (brief). Packard (quotes O. Sacken). Guide. 464.

CYPHON VARIABILIS Thunb.

1866. Larva, pupa (figs.). Frauenfeld. Verh. z. b. Geo. Wien. xvi. 969.
 1867. Larva, pupa. Tournier (quotes Frauenfeld). Assoc. zool. du Lemane.
 1874. Larva (brief). Rolph. Wiegem. Archiv. 40. pt. 1. 25.

RHIPICERIDÆ.

ZENOA PICEA Beauv.

1862. Larva (fig.). O. Sacken. Proc. Ent. Soc. Phil. i. 107. pl. i. fig. 2.

ELATERIDÆ.

1877. Larvæ. Ferris. Larv. des Col. 166-169.

FORNAX ORCHESIDES Newm (?)

1861. Larva (very brief). Horn. Proc. Ent. Soc. Phil. i. 43.
 1862. Larva, pupa (fig.). O. Sacken. Proc. Ent. Soc. Phil. i. 112.

FORNAX BADIUS Melsh.

1862. Larva, pupa (figs.). O. Sacken. Proc. Ent. Soc. Phil. i. 113, 114.

ALAUUS OCULATUS Linn.

1841. Larva (brief). Harris. Inj. Ins. Mass. 48.
 1854. Larva. Emmons. Ins. N. Y. 87.
 1855. Larva (fig.). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 482. pl. v. fig. 3.
 1861. Larva (fig.). Rathvon. Rep. U. S. Dept. Agri. 58.
 1865. Larva. Thomas. Trans. Ill. Agri. Soc. v. 417.
 1868. Larva (fig. only). Glover. Rep. U. S. Dept. Agri. 93.
 1869. Larva (fig. only). Harris. Harr. Corr. 139. pl. iv.
 1876. Larva (brief). Thomas. 1st Rep. Inj. Ins. Ill. 116.
 1879. Larva. Harrington. Rep. Ent. Soc. Ont. 82.

1881. Larva. Saunders. Can. Ent. xiii. 117.
 1881. Larva. Saunders. Rep. Ent. Soc. Ont. 21.
 1883. Larva (fig.). Saunders. Ins. Inj. Fruit. 26.

AL AUS MYOPS Fabr.

1862. Larva (very brief). Evett. Proc. Ent. Soc. Phil. i. 227.
 1868. Larva (habits). Glover (quotes Evett). Rep. U. S. Dept. Agri. 93.
 1870. Larva (fig.). Schiedte. Nat. Tidsskr. vi.

ELATER NIGRICOLLIS Hbst.

1883. Larva. Coquillett. Can. Ent. xiii. 101.

LUDIUS ATTENUATUS Say.

1869. Larva (fig. only). Packard. Guide. 422.

MELANOTUS CASTANIPES Payk.⁴

1870. Larva, pupa (figs.). Schiedte. Nat. Tidsskr. vi. pl. vii.

AGRIOTES MANCUS Say.

1872. Larva, pupa (figs.). Pettit. Can. Ent. iv. 3.
 1877. Larva, pupa (figs. only). Packard. Half Hours Ins. 26.
 1879. Larva, pupa (figs. only). Harrington. Rep. Ent. Soc. Ont. 84.

ATHOUS CUCULLATUS Say.

1883. Larva. Coquillett. Can. Ent. xv. 101.

MELANACTES PICEUS De G. (?)

1874. Larva (fig. only). Le Baron (after Riley). 4th Rep. Inj. Ins. Ill. 45.

UNKNOWN SPECIES.

1868. Luminous Larvæ. Bethune & Morris. Can. Ent. i. 2, 38 (*Melanactes* ? ?).
 1875. Luminous Larvæ. Mann. Psyche. i. 89.
 1877. Larva (figs.). Packard. Half Hours Ins. 27.
 1878. Larva (fig.). Riley. 1st Rep. U. S. Ent. Com. 304.
 1880. Larva (fig.). Clark. Am. Ent. iii. fig. 108 (as *Melanactes* ?).

BUPRESTIDÆ.

1890. Food-Habits. Blanchard. Ent. Am. v. 29-32.

CHALCOPHORA VIRGINIENSIS Dr.

1858. Larva (brief). Fitch. Rep. Nox. Ins. N. Y. 697-700 (Trans. N. Y. Agri. Soc. 1857).
 1882. Larva (fig.). Packard. 3rd Rep. U. S. Ent. Com. 252. pl. vi.

DICERCA DIVARICATA Say.

1829. Larva. Harris. New Eng. Farm. viii. 2.
 1869. Larva. Harris. Harr. Corr. 357.
 1881. Larva. Packard. Ins. Inj. For. & Sh. Tr. 108.
 1882. Larva (fig.). Packard. 3rd Rep. U. S. Ent. Com. 255. pl. vi. fig. 2.
 1883. Larva (brief). Saunders. Ins. Inj. Fruit. 200.

DICERCA OBSCURA Fabr. (?)

1829. Larva. Harris. New Eng. Farm. viii. 2.
 1869. Larva. Harris. Harr. Corr. 357.
 1881. Larva. Packard (quotes Harris). Ins. Inj. For & Sh. Tr. 72 (as
D. lurida).

MELANOPHILA Sp.

1883. Larva (fig.). Packard. 3rd Rep. U. S. Ent. Com. 253. pls. vi.
 fig. 4. xii. fig. 1.

CHRYSOBOTHRIS FEMORATA Fabr.

1854. Larva (fig.). Fitch. 1st Rep. Trans. N. Y. Agri. Soc. 731.
 1861. Larva (fig., brief). Rathvon. Rep. U. S. Dept. Agri. 607.
 1865. Larva. Thomas (quotes Fitch). Trans. Ill. Agri. Soc. v. 420.
 1866. Larva (brief). Walsh. Pract. Ent. i. 26.
 1869. Larva (fig. only). Packard. Guide. 457.
 1874. Egg, Larva, pupa (figs.). Riley. 7th Rep. Nox. Ins. Mo. 72.
 1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox.
 Ins. Ill. 94.
 1874. Larva (brief, figs.). Reed. Rep. Ent. Soc. Ont. 13.
 1875. Larva (fig. only). Cook. 12th Rep. Mich. Bd. Agri. 126 (1873).
 1876. Larva (fig.). Perkins. 2nd Bi. Rep. Vermont Bd. Agri. 601.
 1876. Egg, larva, pupa (figs.). Thomas (quotes Riley). 1st Rep. Nox. Ins.
 Ill. 110.
 1877. Larva (fig.). Packard. Half Hours Ins. 165.
 1877. Larva (brief). Bethune. Can. Ent. ix. 224.
 1877. Larva, pupa (figs.). Bethune. Rep. Ent. Soc. Ont. 25.
 1878. Larva, pupa (figs.). Fletcher. Rep. Ent. Soc. Ont. 49.
 1881. Larva, pupa (figs.). Packard. Ins. Inj. For. & Sh. Tr. 18.
 1883. Larva, pupa. Packard. 3d Rep. U. S. Ent. Com. 251, 252.
 1883. Larva (fig. only). Harrington. Rep. Ent. Soc. Ont. 44.
 1887. Larva, pupa (figs.). Harrington. Rep. Ent. Soc. Ont. 31.
 1887. Larva, pupa (figs.). Bethune. Rep. Ent. Soc. Ont. 57.

CHRYSOBOTHRIS CHRYSOELA Ill.

1885. Larva. Hubbard. Ins. Aff. Orange. 172.

AGRILUS RUFICOLLIS Fabr.

1870. Larva (fig. only). Glover. Rep. U. S. Dept. Agri. 67.
 1870. Larva (fig.). Riley. Am. Ent. ii. 103, 128.
 1873. Larva (fig.). Saunders. Rep. Ent. Soc. Ont. 8.
 1876. Larva (brief). Thomas. 1st Rep. Nox. Ins. Ill. 114.
 1878. Larva (fig. only). Fletcher. Rep. Ent. Soc. Ont. 54.
 1880. Larva (fig. only). Fuller. Am. Ent. iii. 91.
 1883. Larva (fig.). Saunders. Ins. Inj. Fruit 307.
 1890. Habits (fig. of Gall). Lintner. 6th Rep. Inj. Ins. N. Y. 123-125.

BRACHYS ÆRUGINOSA Gory.

1873. Larva (fig.). Packard. 3d Rep. Inj. Ins. Mass. 22.
 1873. Larva (fig.). Packard. Am. Nat. vii. 543.
 1881. Larva (fig.). Packard. Ins. Inj. For. & Sh. Tr. 130.

PACHYSCELUS LÆVIGATUS Say.

1873. Larva (fig.). Packard. 3d Rep. Inj. Ins. Mass. 23.
 1873. Larva (fig.). Packard. Am. Nat. vii. 544.

UNKNOWN SPECIES.

1883. Larva. Packard. 3d Rep. U. S. Ent. Com. 255. pl. v. fig. 5.
 1883. Larva. Packard. 3d Rep. U. S. Ent. Com. 254 (as *Melanophila?*).

LAMPYRIDÆ.

EROS THORACICUS Rand.

1876. Larva. Moody. Psyche. i. 185.

CÆNIA DIMIDIATA Fabr.

1869. Larva (brief). Packard. Guide. 433.
 1886. Larva, pupa (brief). Lugger. Proc. Ent. Soc. Wash. i. 30.

PHOTINUS PYRALIS Linn.

1868. Larva, pupa (figs.). Walsh & Riley. Am. Ent. i. 19.
 1869. Larva, pupa (figs.). Packard. Guide. 466.
 18—. Larva, pupa (figs.). Riley.
 1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Inj. Ins. Ill. 106.

LAMPROHIZA SPLENDIDULA Linn.

1823. Larva. Latreille. Regne Anim. iii. 328 (1817).
 1833. Larva (fig.). Villaret. Ann. Soc. Ent. Fr. 354. pl. xva.

CALOPTERON RETICULATUM Fabr.

1883. Larva, pupa. Coquillett. Can. Ent. xv. 97.

PHOTURIS PENNSYLVANICA De G.

1869. Larva (brief, fig.). Packard. Guide. 466.
 1880. Larva (fig. only). Riley. Am. Ent. iii. 254.

ZARHIPIS RIVERSI Horn.

1886. Larva (brief). Rivers. Bull. Cal. Acad. Sc. ii. 5. 71.
 1886. Larva (brief). Rivers. Am. Nat. 648.

CHAULIOGNATHUS PENNSYLVANICUS De G.

1868. Larva (fig.). Walsh. Am. Ent. i. 35.
 1872. Larva (fig.). Riley. 4th Rep. Nox. Ins. Mo. 28.
 1874. Larva (fig. only). Le Baron. 4th Rep. Inj. Ins. Ill. 108.
 1879. Larva (brief, fig.). Comstock. Cotton Insects. 175.

1879. Larva (fig. only). Comstock. Rep. U. S. Dept. Agri. pl. xii. fig. 4.
 1880. Larva (fig. only). Riley. Bull. U. S. Ent. Com. No. 3. 35.
 1880. Larva (fig.). Hubbard. Am. Ent. iii. 249.
 1883. Larva (fig.). Saunders. Ins. Inj. Fruit. 185 (as *C. americanus*).
 1884. Larva (fig. only). Cutting. 8th Rep. Vermont Bd. Agri. 252.
 1884. Larva (fig. only). Edge. Agri. Penn. 102 (as *C. americanus*).
 1885. Egg, young larva (brief), mature larva (fig.). Hubbard. 4th Rep. U. S. Ent. Com. 96.
 1888. Larva (fig. only). Lintner. 4th Rep. Inj. Ins. N. Y. 86.

PHENGODES LATICOLLIS Lec.

1887. Egg (brief). Atkinson. Am. Nat. xx. 855.

TELEPHORUS BILINEATUS Say.

1871. Larva (fig. only). Packard. Am. Nat. v. 427.
 1872. Larva (fig.). Riley. 4th Rep. Nox. Ins. Mo. 29.
 1878. Larva (fig.). Riley. 1st Rep. U. S. Ent. Com. 303.

CLERIDÆ.

ELASMOCERUS TERMINATUS Say.

1886. Pupa. Hamilton. Can. Ent. xviii. 28.

TARSOSTENUS UNIVITTATUS Rossi.

1856. Larva, pupa (figs.). Perris. Mem. Soc. Sc. Liege. x. 238. pl. v.

CLERUS ICHNEUMONEUS Fabr.

1861. Larva, pupa (brief, figs.). Rathvon. Rep. U. S. Dept. Agri. 597.

OPILUS DOMESTICUS Kl.

1837. Larva. Sturm. Nat. Ins. Deutschl. ii. 16.
 1855. Larva (fig.). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 506. pl. vi.
 1857. Pupa. Letzner. Arb. Schles. Ges. Breslau. 122.
 1862. Larva. Dœbner. Berlin. Ent. Zeit. vi. 67.

NECROBIA RUFICOLLIS Fabr.

1839. Larva, pupa (figs.). Westwood. Intro. Ins. i. 266.
 1848. Larva, pupa (fig.). Heeger. Isis. 974. pl. viii.
 1863. Larva, pupa. Mulsant (quotes Heeger). Hist. Nat. Col. Fr. Angusticollis. 119.
 1877. Larva, pupa (figs.). Perris. Larves des Col. 208-213.

NECROBIA RUFIPES Fabr.

1874. Egg, larva, pupa, cocoon (figs.). Riley. 6th Rep. Nox. Ins. Mo. 96.
 1878. Larva, pupa, cocoon. Perkins (quotes Riley). 5th Rep. Vermont Bd. Agri. 267.

PTINIDÆ.

PTINUS FUR Linn.

1700. Larva. Gœdart. Metam. Nat. ii. 172. exp. 41.

1774. Larva. Meinecke. Naturf. iii. 53.
 1748. Larva, pupa (very brief). Linne. Syst. Nat. 1607 (6th Ed.).
 1774. Larva, pupa (figs.). De Geer. Mem. iv. M. v. 234. pl. ix.
 1776. Larva. Goeze. Naturforsch. viii. 62. pl. ii.
 1779. Larva. Meinecke. Füssly Mag. Lieb. Ent. ii. 126.
 1792. Larva, pupa (brief). Petagne. Instit. Ent. i. 163.
 1803. Larva. Latreille. Hist. Nat. Crust. & Ins. ix. 164.
 1823. Larva. Latreille. Regne Anim. iii. 336 (1817).
 1836. Larva. Audouin & Brulle. Ann. Soc. Ent. Fr. Bull. v. pl. lxii.
 1869. Larva (fig.). Packard. Guide. 470.
 1869. Larva (fig. only). Riley. Am. Nat. ii. 443.
 1876. Larva. Thomas. 1st Rep. Nox. Ins. Ill. 121.
 1883. Larva (fig.). Calwer. Kaferb. 375. pl. xlix.

PTINUS BRUNNEUS Duft.

1870. Larva (brief). Shimer. Am. Ent. ii. 323.

ERNOBIUS MOLLIS Linn.

1792. Larva (brief). Petagne. Instit. Ent. i. 162.
 1837. Larva (brief). Ratzburg. Forstius. i. 42.
 1863. Larva, pupa (figs.). Perris. Hist. Pin. Mar. i. 228-233 (1854).
 1869. Larva (fig. only). Packard. Guide. 471.
 1877. Larva (brief). Kiesenwetter. Nat. Ins. Deutschl. v. 124.

XESTOBIUM AFFINE Lec.

1881. Larva. Packard. Ins. Inj. For. & Sh. Tr. 109.
 1882. Larva (fig.). Packard. 3d Rep. U. S. Ent. Com. pl. xiii. fig. 3.

SITODREPA PANICEA Linn.

1721. Larva, pupa (figs.). Frisch. Beschreib. Ins. (as *Anobium*).
 1837. Larva (brief). Kollar. Nat. Ins. 396 (as *Anobium*).
 1839. Larva (brief). Westwood. Intro. Ins. i. 270 (as *Anobium*).
 1854. Larva, pupa (figs.). Glover. Rep. U. S. Pat. Off. (Agri.). 72. pl. v
 (as *Anobium*).
 1861. Larva (notes). Horn. Proc. Ent. Soc. Phil. i. 28 (as *Anobium*).
 1863. Larva (brief). Stierlin. Mitth. Schw. Ent. Ges. 119 (as *Anobium*).
 1868. Larva, pupa (figs.). Glover. Rep. U. S. Dept. Agri. 98.
 1869. Larva. Perris. Ann. Soc. Ent. Fr. iv. 9. 467 (as *Anobium*).
 1869. Larva (brief), pupa (fig.). Packard. Guide. 470.
 1870. Larva. Dunning. Proc. Ent. Soc. Lond. 33 (as *Anobium*).
 1870. Egg, larva (brief). Shimer. Am. Ent. ii. 322.
 1876. Larva (brief). Thomas. 1st Rep. Nox. Ins. Ill. 122.

EUCRADA HUMERALIS Melsh.

1882. Cocoon. Bowditch. J. Bost. Zoo. Soc. i. 27.

'SINOXYLON BASILARE Say.

1872. Larva, pupa (figs.). Riley. 4th Rep. Nox. Ins. Mo. 53.

1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 103.
 1876. Larva, pupa (figs.). Thomas (quotes Riley). 1st Rep. Nox. Ins. Ill. 124.
 1878. Larva, pupa (figs.). Perkins (quotes Riley).
 1883. Larva, pupa (figs.). Saunders (quotes Riley). Ins. Inj. Fruit. 243.
 1885. Larva, pupa (figs.). Lintner. 2d Rep. Nox. Ins. N. Y. 130.

AMPHICERUS BICAUDATUS Say.

1872. Larva (habits). Riley. 4th Rep. Nox. Ins. Mo. 51.
 1885. Larva (brief). Lintner. 2d Rep. Nox. Ins. N. Y. 127.
 1888. Larva, pupa (brief). Popenoe. The Industrialist. xiii. 181.

DINAPATES WRIGHTII Horn.

1886. Larva (fig.). Horn. Trans. Am. Ent. Soc.

DINODERUS SUBSTRIATUS Payk.

1856. Larva, pupa. Fuss. Verhandl. Siebeub. Ver. Nat. vii. 35-37.
 1863. Larva, pupa (figs.). Perris. Hist. Pin. Mar. i. 493-497.

LYCTUS OPACULUS Lec.

1869. Larva, pupa (figs., brief). Packard. Guide. 472.
 1885. Larva, pupa (figs. only). Lintner. 2d Rep. Nox. Ins. N. Y. 130.

LUCANIDÆ.

LUCANUS DAMA Thunb.

1861. Larva, pupa (figs. brief). Rathvon. Rep. U. S. Agri. 599.
 1869. Larva, cocoon. Packard. Guide. 451.
 1874. Larva, cocoon (figs. only). Le Baron (after Packard). 4th Rep. Nox. Ins. Ill. 77.
 1879. Egg, larva (brief). Fletcher. Rep. Ent. Soc. Ont. 66.
 1881. Larva, pupa (brief). Saunders. Rep. Ent. Soc. Ont. 22.
 1881. Larva (brief). Saunders. Can. Ent. xiii. 118.
 1882. Larva (fig.). Fuchs. Bull. Bk. Ent. Soc. v. 50.
 1883. Larva, cocoon (figs.). Saunders. Ins. Inj. Fruit. 24.

DORCUS PARALLELUS Say.

1881. Pupa. Schaupp. Bull. Bk. Ent. Soc. iv. 35.
 1882. Pupa (fig.). Schaupp. Bull. Bk. Ent. Soc. v. 18. pl. fig. 7.
 1882. Pupa (fig.). Fuchs. Bull. Bk. Ent. Soc. v. 52.

CERUCHUS PICEUS Web.

1882. Larva (fig.), pupa (brief). Fuchs. Bull. Bk. Ent. Soc. v. 59.

PASSALUS CORNUTUS Fabr.

1855. Larva (fig.). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 467. pl. xi.
 1861. Larva (fig. only). Rathvon. Rep. U. S. Dept. Agri. 599.
 1872. Larva, pupa (figs.). Riley. 4th Rep. Nox. Ins. Mo. 139.

1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 78.
 1874. Larva, pupa (figs.). Schiedte. Nat. Tidsskr. ix. 356. pls. xviii, xix.
 1882. Larva (brief), pupa (fig.). Fuchs. Bull. Bk. Ent. Soc. v. 60.

SCARABIDÆ.

COPRIS CAROLINA Linn.

1862. Larva (fig.). O. Sacken. Proc. Ent. Soc. Phil. i. 105. pl. i. fig. 1.
 1874. Larva, pupa, cocoon (figs.). Le Baron (quotes Riley). 4th Rep. Nox. Ins. Ill. 80.

ONTHOPHAGUS NUCHICORNIS Linn.

1877. Larva (fig.). Perris. Larves des Col. 109.

APHODIUS FOSSOR Linn.

1855. Larva (fig.). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 464. pl. iv.
 1869. Larva (fig. only). Packard. Guide. 453.
 1874. Larva. Schiedte. Nat. Tidsskr. iii. 9. 328.
 1877. Larva (fig.). Perris. Larves des Col. 109.

APHODIUS FIMETARIUS Linn.

1720. Larva, pupa (figs.). Frisch. Beschreib. all. Ins. 35. pl. xix. (Supposed by De Haan Mem. s. l. Met. 23 to be a Staphylinid.)
 1842. Larva. Mulsant. Hist. Nat. Col. Fr. Lamell. 159.
 1848. Larva. Erichson. Nat. Ins. Deutsch. 806.

APHODIUS GRANARIUS Linn.

1874. Larva. Schiedte. Nat. Tidsskr. iii. 9. 327.

APHODIUS LIVIDUS Oliv.

1834. Larva, pupa (figs.). Bouche. Nat. der Ins. 190. No. 16.
 1848. Larva, pupa. Erichson (quotes Bouche). Nat. Ins. Deutsch. iii. 838.

APHODIUS INQUINATUS Hbst.

1842. Larva (fig.). Mulsant. Hist. Nat. Col. Fr. Lamell. pl. i. fig. 89.

PLEOCOMA sp.

1866. Larva (fig.). O. Sacken. Tran. Am. Ent. Soc. v. 84.

Trox MONACHUS Hbst.

1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 82 (as *T. pustulatus*).

Trox SCABROSUS Beauv.

1855. Larva (fig.). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 466. pl. iv. fig. 4 (as *T. carolinus*).
 1869. Larva (fig. only). Packard. Guide. 454.

MACRODACTYLUS SUBSPINOSUS Fabr.

1841. Egg, larva, pupa (brief). Harris. Inj. Ins. Mass. 33.
 1855. Larva, pupa (brief). Fitch. 2d Rep. Nox. Ins. (Tran. N. Y. Agri. Soc. 483).
 1861. Larva (fig. only). Rathvon. Rep. U. S. Dept. Agri. 602.
 1869. Egg, larva, pupa (brief). Packard. Guide. 454.
 1873. Egg, larva, pupa. Riley. 5th Rep. Nox. Ins. Mo. 108.
 1876. Egg, larva. Thomas (quotes Harris). 1st Rep. Nox. Ins. Ill. 103.
 1878. Egg, larva (brief). Perkins. 5th Rep. Verm. Bd. Agri. 284.
 1883. Egg, larva, pupa. Saunders (quotes Harris). Ins. Inj. Fruit. 281.
 1890. Egg, larva, pupa (figs.). Riley. Insect Life. ii. 295.

LACHNOSTERNA FUSCA Fröhl.

1841. Larva (brief). Harris. Inj. Ins. Mass. 28 (as *Phyllophaga quercina*).
 1861. Larva (fig. only.). Rathvon. Rep. U. S. Dept. Agri. 601.
 1866. Larva (brief). Walsh. Pract. Ent. i. 60 (as *L. quercina*).
 1869. Larva (fig. only). Packard. Guide. 455.
 1869. Pupa (fig. only). Riley. Am. Nat. ii. 192.
 1872. Larva, pupa (figs. only). Packard. 3d Rep. Inj. & Ben. Ins. Mass.
 1873. Larva, pupa (figs. only). Packard. Am. Nat. vii. 530.
 1874. Larva, pupa (figs., brief). Geddes. Can. Ent. vi. 68 (as *L. quercina*).
 1874. Larva, pupa (figs. only). Le Baron. 4th Rep. Nox. Ins. Ill. 85.
 1875. Larva, pupa (figs.). Cook. 12th Rep. Bd. Agri. Mich. 112.
 1876. Larva, pupa (figs.). Thomas. 1st Rep. Nox. Ins. Ill. 97.
 1877. Larva, pupa (fig. only). Gott. Rep. Ent. Soc. Ont. 43 (as *P. quercina*).
 1877. Larva, pupa (figs. only). Thomas. 7th Rep. Nox. Ins. Ill. 33.
 1877. Larva, pupa (figs. only). Packard. Half Hours Ins. 89.
 1879. Larva, pupa (figs. only). Fletcher. Rep. Ent. Soc. Ont. 69.
 1879. Larva (brief). Howard. Rep. Ent. Soc. Ont. 35.
 1880. Larva, pupa (figs. only). Packard. Zoology. 372 (2d Ed.).
 1883. Larva, pupa (figs. only). Forbes. Tr. Wis. Hort. Soc. xiii. 37.
 1883. Larva (fig.), pupa (brief). Saunders. Ins. Inj. Fruit. 213.
 1883. Larva, pupa (figs. only). Harrington. Rep. Ent. Soc. Ont. 42.
 1884. Larva, pupa (figs. only). Forbes. 2nd Rep. Nox. Ins. Ill. 144 (1883).
 1884. Larva, pupa (figs. only). Edge. Agri. Penn. 37.
 1885. Larva, pupa (figs. only). Fletcher. Rep. Ent. Soc. Ont. 49.
 1888. Egg, larva, pupa (figs.). Lintner. Bull. No. 5. N. Y. State Mus. Nat. Hist. 5.
 1890. Larva, pupa (figs.). Weed. Bull. Ohio Exp. St. i. 133.

POLYPHYLLA IO-LINEATA Say.

1888. Larva (fig.). Horn. Trans. Am. Ent. Soc. xv. 21. pl. iii. fig.

PELIDNOTA PUNCTATA Linn.

1855. Larva (fig.). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 460. pl. iv.

1870. Larva, pupa (figs.). Riley. Am. Ent. ii. 295.
 1871. Larva, pupa (figs.). Riley. 3rd Rep. Nox. Ins. Mo. 77-79.
 1874. Larva, pupa (figs. only). Le Baron (quotes Riley). 4th Rep. Nox. Ins. Ill. 88.
 1874. Larva, pupa (figs.). Saunders. (quotes Riley). Can. Ent. vi. 141.
 1876. Larva, pupa (figs.). Thomas. 1st Rep. Nox. Ins. Ill. 106.
 1877. Larva, pupa (figs. only). Gott. Rep. Ent. Soc. Ont. 45.
 1878. Larva, pupa (figs.). Perkins. 5th Rep. Verm. Bd. Agri. 283.
 1879. Larva, pupa (figs.). Fletcher. Rep. Ent. Soc. Ont. 69.
 1883. Larva, pupa (figs.). Saunders. Ins. Inj. Fruit. 277.

COTALPA LANIGERA Linn.

1869. Egg, young larva (brief), mature larva (fig.). Lockwood. Am. Nat. ii. 186.
 1869. Egg, larva, pupa (fig., brief). Packard (quotes Lockwood). Guide. 455.
 1872. Larva (fig.). Packard. 3rd Rep. Nox. Ins. Mass. 244.
 1873. Egg, larva (fig.). Packard. Am. Nat. vii. 531.
 1877. Larva (fig.). Packard. Half Hours Ins. 32.
 1879. Larva (brief). Fletcher. Rep. Ent. Soc. Ont. 70.
 1879. Egg, larva (fig.). Saunders. Can. Ent. xi. 22.
 1883. Larva (fig.). Forbes. Trans. Wisc. Hort. Soc. xiii. 39.
 1883. Egg, larva (figs.). Saunders. Ins. Inj. Fruit. 155.
 1884. Egg, larva (fig.). Forbes. 2nd Rep. Nox. & Ben. Ins. Ill. 146.

CHALEPUS TRACHYPYGUS Burm.

1882. Larva (fig.). Riley. Rep. U. S. Dept. Agri. 129. pl. vi. fig. 5.

LIGYRUS RELICTUS Say.

1880. Larva (brief). Lintner. Bull. 5th N. Y. St. Mus. Nat. Hist. 6.

LIGYRUS RUGICEPS Lec.

1888. Young larva (brief). Howard. Ins. Life. i. 11.

XYLORYCTES SATYRUS Fabr.

1863. Larva (brief). Walsh. Proc. Bost. Soc. Nat. Hist. ix. 287.
 1868. Larva (brief). Anony. Am. Nat. i. 60.
 1873. Larva (brief). Glover. Rep. U. S. Dept. Agri. 152.

STRATEGUS JULIANUS Burm.

1886. Larva, pupa (figs.). Duges. Ann. Ent. Soc. Belg. xxx. 27. pl. i.

ALLORHINA NITIDA Linn.

1861. Larva (fig.). Rathvon. Rep. U. S. Dept. Agri. 602.
 1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 89.
 1876. Larva, pupa (figs. only). Thomas. 1st Rep. Nox. Ins. Ill. 107.
 1884. Larva, pupa (figs. only). Forbes. 2nd Rep. Nox. Ins. Ill. 149. pl. vii.
 1884. Larva, pupa (figs.). Forbes (after Riley). Miss. Vall. Hort. Soc. ii.

OSMODERMA SCABRA Beauv.

1841. Larva (brief). Harris. Inj. Ins. Mass. 39.
 1861. Larva, cocoon (brief). Harris. Ins. Mass. 42.
 1869. Larva, cocoon. Packard (quotes Harris). Guide. 457.
 1879. Cocoon. Schaupp. Bull. Bk. Ent. Soc. ii. 98.
 1883. Larva (brief). Harrington. Rep. Ent. Soc. Ont. 44.
 1883. Larva, cocoon (brief). Saunders. Ins. Inj. Fruit. 26.
 1889. Larva. Beutenmüller. Psyche. v. p.

VALGUS SQUAMIGER Beauv.

1858. Larva (Biol. notes). Fitch. 4th Rep. Nox. Ins. N. Y. 695 (Trans. N. Y. Agri. Soc. 1857, as *V. Seticollis* Beauv.).

SPONDYLIDÆ.

1862. Larva (fig.). O. Sacken. Pro. Ent. Soc. Phil. i. 118. pl. i. fig. 6.
 1869. Larva (fig.). Packard. Guide. 494.

CERAMBYCIDÆ.

1880. Food-Habits. Riley. Am. Ent. iii. 237-239, 270, 271.

CRIOCEPHALUS AGRESTIS Kby.

1882. Pupa (fig.). Packard. 3rd Rep. U. S. Ent. Com. pl. vii. fig. 3.

ORTHOSOMA BRUNNEUM Forst.

1861. Larva (fig. only). Rathvon. Rep. U. S. Dept. Agri. 611 (as *P. cylindricus*).
 1869. Larva (fig. only). Packard. Guide. 495 (as *O. unicolor*).
 1877. Larva (brief). Bethune. Can. Ent. ix. 221.
 1877. Larva (figs. only). Packard. Half Hours Ins. 236.
 1881. Larva, pupa. Packard. Ins. Inj. For. & Sh. Tr. 161.
 1882. Larva (fig.). Packard. 3d Rep. U. S. Ent. Com. 260. pl. x. fig. 1.
 1883. Larva (brief). Saunders. Rep. Ent. Soc. Ont. 54.

PRIONUS LATICOLLIS Dr.

1861. Larva (fig. only). Rathvon. Rep. U. S. Dept. Agri. 612.
 1869. Larva, pupa (figs.). Walsh & Riley. Am. Ent. i. 231.
 1870. Larva, pupa (figs.). Riley. 2nd Rep. Nox. Ins. Mo. 87.
 1873. Larva (fig.). Smith. 6th Rep. Conn. Bd. Agri. 346 (as *P. brevicornis*).
 1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th. Rep. Nox. Ins. Ill. 151.
 1875. Larva (fig. only). Saunders. Can. Ent. vi. 29.
 1875. Larva (fig. only). Saunders. Rep. Ent. Soc. Ont. 39.
 1876. Larva (brief). Thomas. 1st Rep. Nox. Ins. Ill. 147.
 1877. Larva (fig. only). Bethune. Rep. Ent. Soc. Ont. 23.
 1877. Larva (fig. only). Packard. Half Hours Ins. 237.
 1877. Larva (fig. only). Cook. 16th Rep. Mich. Bd. Agri.
 1878. Larva (fig.). Perkins. 5th Rep. Verm. Bd. Agri. 271.

1881. Larva (fig.). Goldsmith (quotes Riley). Ky. Bureau Agri. 254.
 1881. Larva, pupa (figs. only). Packard. Ins. Inj. For. & Sh. Tr. 119.
 1883. Larva, pupa (figs.). Saunders. Ins. Inj. Fruit. 232.

ASEMUM MÆSTUM Hald.

1869. Larva, pupa (figs.). Packard. Guide. 496.
 1881. Larva, pupa (figs.). Packard. Ins. Inj. For. & Sh. Tr. 158.
 1882. Larva, pupa (figs.). Packard. 3rd. Rep. U. S. Ent. Com. 256.
 pl. ix.

HYLOTRUPES BAJULUS Linn.

1848. Larva (biological notes). Nordlinger. ix. 256.
 1857. Larva, pupa (figs.). Heeger. Sitzb. Wien. Acad. Wiss. xxiv. 323.
 1863. Larva, pupa (figs.). Perris. Hist. Pin. Mar. i. 368-373.
 1875. Larva, pupa (fig.). Schiœdte. Nat. Tidsskr. x. 417. pl. xv.

PHYMATODES AMÆNUS Say.

1871. Larva (fig.). Packard. 1st. Rep. Inj. Ins. Mass. 17 (as *callidium*).
 1871. Larva (fig.). Packard. Am. Nat. v. 423 (as *callidium*).
 1876. Larva (brief). Thomas. 1st Rep. Nox. Ins. Ill. 149. (as *callidium*).
 1881. Larva, pupa (fig.). Packard. Ins. Inj. For. & Sh. Tr. 25.

CALLIDIUM ANTENNATUM Newm.

1861. Larva (fig.). Rathvon. Rep. U. S. Pat. Off. (Agri.). 616 (as *C. violæ*).

CHION CINCTUS Dr.

1888. Egg, larva, pupa (figs.). Osborn. Gard. & Forest. i. 148.

ELAPHIDION VILLOSUM Fabr.

1819. Larva. Harris. Agri. Reposit. v. 307 (as *Stenocerus putator*).
 1826. Larva. Peck. Zoo. Journ. ii. 489 (as *Stenocerus putator*).
 1854. Larva (brief). Emmons. Ins. N. York. 124
 1858. Larva, pupa. Fitch. 5th Rep. Nox. Ins. 801 (Tr. N. Y. Agri. Soc.).
 1862. Larva, pupa (brief). Harris. Inj. Ins. Mass. 98.
 1869. Larva, pupa (figs. only). Packard. Guide. 496 (as *S. putator*).
 1872. Larva (fig.). Glover. Rep. U. S. Dept. Agri. 72 (1871).
 1877. Larva, pupa (fig.). Packard (quotes Fitch) Half Hours Ins. 241 (as *S. putator*).
 1878. Larva, pupa (figs.). Buckhaut. Agricul. Penn. 258.
 1881. Larva, pupa (fig.). Packard. Ins. Inj. For. & Sh. Tr. 33.
 1883. Larva, pupa (fig.). Saunders. Ins. Inj. Fruit. 32.
 1884. Larva, pupa (figs.). Edge. Agricul. Penn. 107.

ELAPHIDION PARALLELUM Newm.

1874. Larva, pupa (figs.). Le Baron (after Reilly). 4th Rep. Nox. Ins. Ill.
 152.

1875. Larva, pupa (figs. only). Cook. 12th Rep. Mich. Bd. Agri. 128
(1873-74).
1876. Larva, pupa (figs. only). Thomas. 1st Rep. Nox. Ins. Ill.
1882. Larva (fig.). Packard. 3rd Rep. U. S. Ent. Com. 257. pl. vii.
fig. 1.
1883. Larva, pupa (figs.). Saunders. Ins. Inj. Fruit. 33.
1885. Larva, pupa (figs.). Hubbard. Ins. Aff. Orange. 126, 171.

ELAPHIDIION INERME Newm.

1885. Larva. Hubbard. Ins. Aff. Fruit. 171.

TRAGIDION FULVIPENNE Say.

1889. Egg. Popenoe. Insect Life. ii. 197.

CYLLENE PICTUS Dr.

1862. Larva, pupa (fig.). O. Sacken. Pro. Ent. Soc. Phil. i. 121. pl. i.
(might be *C. robinia*).
1869. Larva, pupa (figs.). Packard. Guide. 497.
1881. Larva, pupa (figs.). Packard. Ins. Inj. For. & Sh. Tr. 70.

CYLLENE ROBINLÆ Forst.

1861. Larva, pupa (figs.). Rathvon. Rep. U. S. Pat. Off. (Agri.) 616.
1877. Larva (brief). Bethune. Can. Ent. ix. 223.
1881. Larva, pupa. Packard. Ins. Inj. For. & Sh. Tr. 97.

CYLLENE ERYTHROPTERUS Chev.

1885. Larva, pupa (figs.). Duges. Ann. Ent. Soc. Belg. xxix. 40. pl. iii.

GLYCOBIUS SPECIOSUS Say.

1884. Young larva (brief). Packard. Am. Nat. xviii. 1151.

XYLOTRECHUS COLONUS Fabr.

1881. Larva, pupa. Packard. Ins. Inj. For. & Sh. Tr. 27.
1882. Larva, pupa (fig.). Packard. 3rd Rep. U. S. Ent. Com. 258. pl. xii.
1888. Larvâ (fig. only). Lintner (after Packard). 4th Rep. Inj. Ins. N. Y.
94.

XYLOTRECHUS ANNOSUS Say.

1883. Larva (biol. notes). Coquillett. Can. Ent. xv. 31.

RHAGIUM LINEATUM Oliv.

1861. Larva (fig.). Rathvon. Rep. U. S. Pat. Off. (Agri.) 620.
1881. Larva. Packard. Ins. Inj. For. & Sh. Tr. 163.
1882. Larva (fig.). Packard. 3rd. Rep. U. S. Ent. Com. 259. pl. xi.

MONOHAMMUS TITILLATOR Fabr.

1858. Larva (brief). Fitch. 4th. Rep. Nox. Ins. 707 (Trans. N. Y. Agri. Soc. 1858, as *M. notatus* Dr.).
 1861. Larva, pupa (figs.). Rathvon. Rep. U. S. Pat. Off. (Agri.) 614.

MONOHAMMUS CONFUSOR Kby.

1877. Larva (brief). Bethune. Can. Ent. ix. 225.
 1881. Larva, pupa (figs.). Packard. Ins. Inj. For. & Sh. Tr. 154.
 1883. Larva (brief). Saunders. Rep. Ent. Soc. Ont. 53.
 1884. Egg, young larva (brief). Packard. Am. Nat. xviii. 1150.

MONOHAMMUS SCUTELLATUS Say.

1877. Larva, pupa (brief). Bethune. Rep. Ent. Soc. Ont. 23.
 1883. Larva (brief). Saunders. Rep. Ent. Soc. Ont. 53.

GOES TIGRINA De G.

1855. Larva, pupa (fig.). Fitch. Trans. N. Y. Agri. Soc. 853 (1854). (as *Monohanus tigrinus*).

PSENO CERUS SUPERNOTATUS Say.

1862. Larva. O. Sacken. Proc. Ent. Soc. Phil. i. 122.
 1869. Larva (fig.). Packard. Guide. 499-500.
 1877. Larva (fig.). Packard. Half Hours Ins. 166.
 1880. Larva (brief). Saunders. Can. Ent. xii. 6.
 1883. Larva (brief). Saunders. Ins. Inj. Fruit. 338.

LEPTOSTYLUS BIUSTUS Lec.

1885. Larva (brief). Ins. Inj. Orange. 174.

LIOPUS FASCICULARIS Harr.

1869. Larva (brief). Packard. Guide. 497.
 1871. Larva, pupa (fig.). Packard. 1st Rep. Inj. Ins. Mass. 15-17 (as *L. xanthoxyli*).
 1871. Larva, pupa (fig. only). Packard. Am. Nat. v. 424.
 1877. Larva (fig. only). Packard. Half Hours Ins. 169, (as *L. xanthoxyli*).
 1881. Larva (fig.), pupa. Packard. Ins. Inj. For. & Sh. Tr. 252.

UROGRAPHIS FASCIATUS De G.

1858. Larva. Fitch. 5th. Rep. Trans. N. Y. Agri. Soc. 795.
 1881. Larva. Packard. Ins. Inj. For. & Sh. Tr. 22.

ONCIDERES CINGULATA Say.

1880. Larva, pupa (figs.). Riley. Am. Ent. iii. 297.
 1885. Egg, larva, pupa (figs., brief). Hubbard. Ins. Inj. Orange. 128.

SAPERDA CALCARATA Say.

1841. Larva (brief). Harris. Inj. Ins. Mass. 88.
 1854. Larva (brief). Emmons. Ins. N. Y. 121.
 1877. Larva (fig. only). Packard. Half Hours Ins. 251.
 1881. Larva (fig.). Packard. Ins. Inj. For. & Sh. Tr. 118.
 1889. Larva (fig.). Lugger (after Packard). Bull. No. 9. Minn. Exp. St.
 55, 56.

SAPERDA MÆSTA Lec.

1874. Larva, pupa. Saunders. Can. Ent. vi. 60-63.
 1881. Larva, pupa. Packard (quotes Saunders). Ins. Inj. For. & Sh. Tr. 118.

SAPERDA CANDIDA Fabr.

1841. Larva (brief). Harris. Inj. Ins. Mass. 89 (as *S. bivittata*).
 1855. Larva (fig.). Fitch. Trans. N. Y. St. Agri. Soc. 721 (1854).
 1860. Larva. Uhler. Rep. U. S. Pat. Off. (Agri.). 317.
 1861. Larva (fig. only). Rathvon. Rep. U. S. Pat. Off. (Agri.) 617 (as
S. bivittata).
 1862. Larva (fig.). Couper. Can. Nat. and Geo. vii. 280.
 1862. Larva. Packard. 2nd Rep. Nat. Hist. Soc. Me. 192. (7th Rep.
 Agri. Me.).
 1862. Larva (fig.). Harris. Inj. Ins. Mass. 108. pl. ii. fig. 17.
 1869. Larva (fig.). Packard. Guide. 500.
 1872. Larva (fig. only). Tenney. Nat. Hist. Anim. 166.
 1873. Larva (fig. only). Smith. 6th Rep. Conn. Bd. Agri. 348 (1872-73).
 1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox. Ins.
 Ill. 157.
 1875. Larva, pupa (figs.). Cook (after Riley). 12th Rep. Mich. Bd. Agri.
 124 (1873).
 1876. Larva, pupa (figs. only). Thomas (after Riley). 1st. Rep. Nox. Ins.
 Ill. 153.
 1876. Larva, pupa (figs.). Perkins (after Riley). 2d Bi-Rep. Vermont Bd.
 Agri. 599.
 1877. Larva, pupa (figs. only). Half Hours Ins. 164.
 1877. Larva (brief). Bethune. Can. Ent. ix. 223.
 1877. Larva, pupa (figs.). Bethune. Rep. Ent. Soc. Ont. 27.
 1883. Larva, pupa (figs. only). Harrington. Rep. Ent. Soc. Ont. 45.
 1883. Egg, larva, pupa (figs.). Saunders. Ins. Inj. Fruit. 17, 18.
 1887. Larva, pupa (figs.). Bethune. Rep. Ent. Soc. Ont. 58.

SAPERDA VESTITA Say.

1861. Larva (fig. only). Rathvon. Rep. U. S. Pat. Off. (Agri.). 618.
 1877. Larva (fig. only). Packard. Half Hours Ins. 250.
 1881. Larva (fig. only). Packard. Ins. Inj. For. & Sh. Tr. 124.

SAPERDA TRIDENTATA Oliv.

1858. Larva. Fitch. 5th Rep. Trans. N. Y. Agri. Soc. 840.
 1869. Larva (fig.). Packard. Guide. 499.

1876. Larva (brief). Thomas. 1st Rep. Nox. Ins. Ill. 156.
 1877. Larva (fig. only). Packard. Half Hours Ins. 249.
 1881. Larva. Packard. Ins. Inj. For. & Sh. Tr. 58.
 1882. Larva. Packard. 3d Rep. U. S. Ent. Com. pl. viii. fig. 2.
 1885. Larva. Forbes. 3d Rep. Nox. Ins. Ill. 112-114 (1884).
 1887. Larva (brief). Harrington. Rep. Ent. Soc. Ont. 31.

SAPERDA FAYI Bland.

1878. Biological Notes. Zimmerman. Can. Ent. x. 220.
 1888. Larva, pupa (biological notes). Hamilton. Can. Ent. xx. 6.
 1888. Larva, pupa (biological notes). Hamilton. Rep. Ent. Soc. Ont. 41
 (1887).

SAPERDA CONCOLOR Lec.

1888. Larva (biolog. notes). Hamilton. Can. Ent. xx. 8.
 1888. Larva (biolog. notes). Hamilton. Rep. Ent. Soc. Ont. 42 (1887).
 1889. Larva (fig., gall-like swelling). Luggler. Bull. No. 9. Minn. Exp. St.
 56, 57.

SAPERDA sp.

1882. Larva (fig.). Packard. 3d Rep. U. S. Ent. Com. 256. pl. xii. fig. 4.

OBBEREA TRIPUNCTATA Swed.

1841. Larva (brief). Harris. Inj. Ins. Mass. 91.
 1854. Larva (brief). Emmons. Ins. N. York. 122.
 1861. Larva (fig.). Rathvon. Rep. U. S. Pat. Off. (Agri.). 619.
 1873. Egg, larva (brief). Saunders. Rep. Ent. Soc. Ont. 9.
 1877. Egg, larva (brief). Bethune. Can. Ent. ix. 226.

UNKNOWN SPECIES.

1882. Larvæ and pupa. Packard. 3d Rep. U. S. Ent. Com. 15 unidentified
 species are described and figured in this work.

CHRYSOMELIDÆ.

1890. Food-Habits. Beutenmüller. Ent. Am. vi. 175-178.

LEMA COLLARIS Say.

1883. Larva. Coquillett. Can. Ent. xv. 22.

LEMA TRILINEATA Oliv.

1841. Egg, larva (brief). Harris. Inj. Ins. Mass. 96.
 1862. Egg, larva, pupa (brief). Harris. Inj. Ins. Mass. 119.
 1865. Larva. Thomas. Trans. Ill. Agri. Soc. v. 431.
 1866. Egg, larva (brief). Walsh. Pract. Ent. ii. 26.
 1868. Egg, larva (fig.), pupa (brief). Walsh & Riley. Am. Ent. i. 26.
 1869. Egg, larva, pupa (figs., brief). Packard. Guide. 503.
 1870. Egg, larva, pupa (figs.). Compton. Prize Ess. of the Cult. of the
 Potato. 22.
 1871. Egg, larva, pupa (figs.). Riley. Am. Ent. ii. 327.

1871. Egg, larva, pupa (figs.). Saunders. Can. Ent. iii. 43.
 1871. Egg, larva, pupa (figs.). Glover. Rep. U. S. Dept. Agri. 74.
 1874. Egg, larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 164.
 1876. Egg, larva, pupa (figs.). Perkins. 3d Bi-Rep. Verm. Bd. Agri. 573.
 1876. Egg, larva, pupa. Thomas. 1st Rep. Nox. Ins. Ill. 159.
 1879. Egg, larva, pupa (figs.). Comstock. Rep. U. S. Dept. Agri. 214. pl. iii.
 1882. Larva, pupa (figs.). Harrington. Rep. Ent. Soc. Ont. 55.
 1885. Egg, larva, pupa (figs.). Lintner. 2d Rep. Nox. Ins. N. Y. 133, 134.

CRIOCERIS ASPARAGI Linn.

1720. Larva, pupa (figs.). Frisch. Beschreib. Ins. i. 27-30. pl. vi. figs. 1-3.
 1749. Larva, pupa (figs.). Rösel. Ins. Belust. ii. 11, 12. pl. vi.
 1834. Larva (figs.). Bouche. Nat. Ins. 204. pl. x. figs. 38-42.
 1839. Egg, larva, pupa (figs.). Westwood. Intro. Ins. i. 374.
 1841. Egg, larva. Harris. Inj. Ins. Mass. 96.
 1862. Egg, larva, pupa (figs.) Fitch. 8th Rep. Nox. Ins. Trans. N. Y. Agri. Soc. 664-667.
 1857. Larva, pupa (detailed). Letzner. Arb. Schles. Geschell. 119.
 1873. Egg (brief). Smith. 6th Rep. Conn. Bd. Agri. 349 (1872-73).
 1879. Egg, larva (figs.). Comstock. Rep. U. S. Dept. Agri. 216. pl. iii.
 1880. Egg, larva (figs. only). Bethune. Rep. Ent. Soc. Ont. 47.
 1880. Egg, larva (fig. only). Fuller. Am. Ent. iii. 3.
 1880. Egg, larva (figs.). Omerod. Inj. Ins. p.
 1881. Egg, larva (figs. only). Bethune. Can. Ent. xiii. 253.
 1881. Egg, larva (figs. only). Bethune. Rep. Ent. Soc. Ont. 36.
 1882. Egg, larva (figs.). Harrington. Rep. Ent. Soc. Ont. 55.
 1882. Egg, larva (figs.). Lintner. 1st. Rep. Nox. Ins. N. Y. 241, 242.
 1884. Larva (fig.). Edge. Agri. Penn. 101.

CRIOCERIS 12-PUNCTATUS Linn.

1738. Larva (fig.). Frisch. Beschreib. Ins. xiii. 29, 30. pl. xxviii.

COSCINOPTERA DOMINICANA Fabr.

1869. Larval case. Harris. Harr. Corr. 76.
 1874. Egg, larva, case (figs.). Riley. 6th Rep. Nox. Ins. Mo. 127 (1873).
 1874. Egg, larva, case (figs.). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 169.
 1880. Egg, larva (fig. only). W. S. B. Am. Ent. iii. 227.
 1882. Egg, larva (figs. only). Harrington (after Riley). Rep. Ent. Soc. Ont. 55.

CHLAMYS PLICATA Fabr.

1869. Larva, case (figs.). Packard. Guide. 507.
 1874. Larva, case (figs.). Riley (after Packard). 6th Rep. Nox. Ins. Mo. 128.
 1877. Larva, case (fig. only). Packard. Half Hours Ins. 211 (as *Chlamys* sp.).
 1882. Larva, case (figs. only). Harrington (after Packard). Rep. Ent. Soc. Ont. 56.

1888. Egg, larva, pupa (figs.). Marlatt. The Industrialist. xiv. 53.

ADOXUS VITIS Linn.

1803. Larva. Latreille. Nat. Hist. Crust. & Ins. xi. 331.

1846. Larva (notes). Guerin-Meneville. Ann. Soc. Ent. Fr. ii. 4 Bull. 35.

1873. Larva (fig.). Von Horvath. Verh. z. b. Ges. Wien. xxiii. 37-40. pl. xviii.

1874. Larva (notes). Girard. Ann. Soc. Ent. Fr. v. 4 Bull. 63. 1140.

1875. Larva. Lichtenstein. Ann. Soc. Ent. Fr. v. 5 Bull. 105.

1879. Life-history. Lichtenstein. Etudes sur le Griboure, Montpellier. 12.

METACHROMA PALLIDA Say.

1883. Larva. Coquillett. Can. Ent. xv. 21 (as *Chrysomela pallida*).

PARIA ATERRIMA Oliv.

1880. Larva, pupa. Cook. 19th Rep. Mich. Bd. Agri. 274.

1880. Larva, pupa, cocoon. Riley. Am. Ent. iii. 243.

1883. Larva (fig.). Forbes. Trans. Wis. Hort. Soc. xiii. 41.

1884. Larva (fig.). Forbes. 2d Rep. Nox. Ins. Ill. 159. pl. ix. fig. 5b.

1884. Larva, pupa (fig.). Forbes. Miss. Vall. Hort. Soc. ii. 249.

1884. Larva, pupa (figs.). Forbes. Psyche. iv. 126. pl. i.

GRAPHOPS PUBESCENS Melsh.

1884. Larva, pupa (fig.). Forbes. Trans. Wis. Hort. Soc. xiii. 44 (1883).

1884. Life-history (figs.). Forbes. 2nd Rep. Nox. Ins. Ill. 163. pls. vii, xix (1883).

1884. Larva, pupa (fig.). Forbes. Miss. Vall. Hort. Soc. ii. 246.

1885. Larva, pupa (figs.). Forbes. 3rd Rep. Nox. Ins. Ill. pl. xi. figs. 1, 2, 3 (1884).

COLASPIS BRUNNEA Fabr.

1871. Larva (fig.). Riley. 3rd Rep. Nox. Ins. Mo. 81-84 (as *C. flavida*).

1872. Larva (fig.). Riley. 4th Rep. Nox. Ins. Mo. 34 (as *C. flavida*).

1872. Larva (fig.). Riley. Am. Nat. vi. 293 (as *C. flavida*).

1876. Larva. Thomas (quotes Riley). 1st Rep. Nox. Ins. Ill. 164 (as *C. flavida*).

1880. Larva (fig. only). Anony. Am. Ent. iii. 243.

1882. Larva (fig. only). Harrington. Rep. Ent. Soc. Ont. 57 (as *C. flavida*).

1883. Larva (fig.), pupa (brief). Saunders. Ins. Inj. Fruit. 283.

1884. Larva (fig.). Forbes. 2nd Rep. Nox. Ins. Ill. 156. pl. ix.

1884. Larva, pupa (figs.). Forbes. Psyche. iv. 123. pl. i.

1884. Larva, pupa (figs.). Forbes. Miss. Vall. Hort. Soc. ii. 246.

DORYPHORA CLIVICOLLIS Kby.

1841. Larva, pupa (very brief). Harris. Inj. Ins. Mass. 107 (as *Chrysomela trimaculata*).

1861. Larva (brief). Proc. Ent. Soc. Phil. i. 44 (as *D. trimaculata*).

1869. Larva (fig. only). Packard. Guide. 508 (as *Chry. trimaculata*).

1883. Larva. Coquillett. Can. Ent. xv. 21.

1885. Larva, pupa. French. Can. Ent. xvii. 19.

DORYPHORA II-LINEATA Stål.

1884. Larva, pupa (figs.). Duges. Ann. Ent. Soc. Belg. xxviii. 1. pl. i. figs. 1-14.

DORYPHORA IO-LINEATA Say.

1863. Egg, larva. Fitch. 9th Rep. Nox. Ins. Trans. N.Y. Agri. Soc. 788.

1864. Larva. Thomas. Tran. Ill. Agri. Soc. v. 437.

1865. Larva (brief). Walsh. Pract. Ent. i. 3.

1866. Egg, larva (figs. only). Walsh. Pract. Ent. ii. 13.

1866. Egg, larva (brief). Shimer. Pract. Ent. i. 84.

1867. Larva (fig. only). Glover. Rep. U. S. Dept. Agri. 63.

1868. Egg, larva, pupa (figs.). Walsh & Riley. Am. Ent. i. 41.

1869. Egg, larva, pupa (figs.). Packard. Guide. 506.

1870. Egg, larva, pupa (figs.). Compton. Prize Essay of Cult. Potatoe. 23.

1870. Egg, larva, pupa (figs. only). Shimer. Am. Nat. iii. 92.

1871. Egg, larva, pupa (figs., brief). Saunders & Reed. Can. Ent. iii. 42.

1871. Larva (fig., brief). Glover. Rep. U. S. Dept. Agri. 74 (1870).

1874. Egg, larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 165.

1875. Larva (fig. only). Glover. Rep. U. S. Dept. Agric. 123 (1874).

1875. Egg, larva, pupa (figs.). Cook. 12th Rep. Bd. Agri. Mich. 107 (1873).

1875. Egg, larva, pupa (figs. only). Saunders. Rep. Ent. Soc. Ont. 34.

1876. Larva. Thomas. 1st Rep. Nox. Ins. Ill. 161.

1876. Egg, larva, pupa (figs.). Perkins. 3rd Bi. Rep. Verm. Bd. Agri. 578.

1875. Egg, larva, pupa (figs.). Cutting. 2nd Bi. Rep. Verm. Bd. Agri. 671.

1877. Larva, pupa (figs. only). Packard. Half Hours Ins. 280

1880. Egg, larva, pupa (figs.). Fuller. Am. Ent. iii. 116.

1882. Egg, larva, pupa (figs. only). Harrington. Rep. Ent. Soc. Ont. 58.

1883. Pupa (notes). Coleman. Quart. Journ. Bost. Zoo. Soc. ii. 31.

1883. Egg, larva (figs. only). Griffith & Henfrey. Microg. Dict. 270.

1883. Larva. Coquillett. Can. Ent. xv. 21.

1885. Egg, larva, pupa (figs.). Fletcher. Rep. Ent. Ex. Farms. 16.

DORYPHORA JUNCTA Germ.

1868. Egg, larva, pupa (figs.). Walsh & Riley. Am. Ent. i. 43.

1869. Egg, larva (figs.). Packard. Guide. 509.

1870. Larva (fig.). Compton (quotes Walsh). Prize Essay on Cult. of Potatoe. 25.

1871. Larva (fig.). Glover. Rep. U. S. Dept. Agri. 74.

1874. Egg, larva (figs. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 165.

1874. Larva (fig.). Glover. Rep. U. S. Dept. Agric. 123.

1876. Larva. Thomas. 1st Rep. Nox. Ins. Ill. 161.

1877. Egg, larva (figs.). Packard. Half Hours Ins. 208.

1880. Egg, larva (figs.). Fuller. Am. Ent. iii. 117.

1883. Larva. Coquillett. Can. Ent. xv. 22.

CHRYSOMELA MULTIGUTTATA Stål.

1883. Larva. Coquillett. Can. Ent. xv. 22.

CHRYSOMELA SCALARIS Lec.

1841. Larva (brief). Harris. Inj. Ins. Mass. 107.

1881. Egg, larva, pupa. Packard. Ins. Inj. For. & Sh. Tr. 126.

CHRYSOMELA PHILADELPHICA Linn.

1869. Larva (brief, fig.). Packard. Guide. 509.

CHRYSOMELA SIMILIS Rog.

1883. Larva. Coquillett. Can. Ent. xv. 22.

CHRYSOMELA BIGSBYANA Kby.

1883. Larva. Coquillett. Can. Ent. xv. 22.

PRASOCURIS PHELLANDRII Linn.

1850. Larva (biological notes). Boic. Stett. Ent. zeit. ii. 360.

1857. Larva, pupa. Cornelius. Stett. Ent. zeit. xviii. 404.

1857. Larva, pupa. Letzner. Arb. Schles. Geo. Breslau. 127-130.

1866. Larva (biolog. notes). Low. Ver h. z. b. Ges. Wien. xvi. 956.

1874. Larva, pupa. Kaltenbach (quotes Cornelius). Pflanze feinde. 10.

GASTROIDEA POLYGONI Linn.

1854. Larva, pupa (figs.). Heeger. Sitzb. Ak. Wiss. Wien. xi. 927-929.

1855. Larva (brief). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 612.

1856. Larva. Letzner. Arb. Schles. Ges. 104-106.

1857. Larva, pupa (figs.). Curtis. Journ. Roy. Agri. Soc. Eng. 58. pl.

1874. Larva, pupa. Kaltenbach. Pflanze feinde. 511.

LINA TREMULÆ Fabr.

1837. Larva, pupa (figs.). Ratzeburg. Forst. Insect. i. 245. pl. xx.

1843. Egg, larva, pupa (brief). Klingelhofer. Ent. Zeit. Stett. 85.

1880. Larva. Anony. Am. Ent. iii. 161.

1889. Larva, pupa (figs.). Lugger (after Taschenberg). Bull. No. 9. Exp. St. Minn. 55.

LINA LAPPONICA Linn.

1857. Larva. Mærkel. Allg. Nat. Zeit. 174.

1875. Larva (habits). Letzner. Arb. Schles. Ges. Breslau. 170.

1882. Larva (brief). Harrington. Rep. Ent. Soc. Ont. 59.

1889. Larva (brief). Lugger. Bull. No. 9. Exp. St. Minn. 55.

LINA SCRIPTA Fabr.

1855. Larva (brief). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 611.

1880. Larva, pupa (figs.). Riley. Am. Ent. iii. 157-161.

1881. Larva, pupa (figs.). Packard. Ins. Inj. For. & Sh. Tr. 116 (after Riley).

1884. Larva (brief). Riley. Rep. U. S. Dept. Agri. 336-340.

1889. Larva (fig.). Lugger. Bull. No. 9. Exp. St. Minn. 53, 54.

PHYLLODECTA VULGATISSIMA Linn.

1775. Larva, pupa (figs.). De Geer. Mem. v. 401. pl. ix. figs. 27-33.

1857. Larva, pupa. Cornelius. Stett. Ent. Zeit. xviii. 392-399.

MONOCESTA CORYLI Say.

1878. Egg, larva, pupa (figs.). Riley. Rep. U. S. Dept. Agri. 246.

1881. Larva, pupa (figs.). Packard. Ins. Inj. For. & Sh. Tr. 64.

ANGELASTICA HALENSIS Linn.

1874. Biological note. Kaltenbach. Pflanze feinde. 308.

DIABROTICA VITTATA Fabr.

1869. Larva, pupa (figs.). Packard. Guide. 505.

1870. Larva, pupa (figs.). Riley. 2nd Rep. Nox. Ins. Mo. 65

1871. Larva, pupa (brief). Glover. Rep. U. S. Dept. Agri. 74 (1870).

1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 170.

1875. Larva (fig.). Cook. 12th Rep. St. Bd. Agri. Mich. 122 (1873).

1876. Larva (fig. only). Thomas. 1st Rep. Nox. Ins. Ill. 165.

1878. Larva, pupa (figs.). Saunders. Rep. Ent. Soc. Ont. 30.

1882. Larva (brief). Harrington. Rep. Ent. Soc. Ont. 59.

1883. Larva, pupa (figs.). Saunders. Ins. Inj. Fruit. 363.

1884. Larva (fig.). Edge. Agricul. Penn. 65.

DIABROTICA LONGICORNIS Say.

1884. Larva, pupa (figs.). Forbes. 2nd Rep. Nox. Ins. Ill. 55 (1883).

TRIRHABDA TOMENTOSA Linn.

1888. Larva (brief). Lintner. 4th Rep. Inj. Ins. N. Y. 142 (as *T. canadensis*).

1890. Larva. Beutenmüller. Can. Ent. xxii. 36.

GALERUCA XANTHOMELÆNA Schr.

1841. Egg, larva (brief). Harris. Inj. Ins. Mass. 73 (as *G. californiensis*).

1867. Egg, larva, pupa. Glover. Rep. U. S. Dept. Agri. 62. (as *G. californiensis*).

1867. Larva, pupa. Cornelius. Stett. Ent. Zeit. xxviii. 213, 214.

1871. Egg, larva. Glover. Rep. U. S. Dept. Agri. 73.

1882. Egg, larva, pupa (figs.). Riley. Rep. U. S. Dept. Agri. 159-170.

1882. Egg, larva, pupa (figs.). Anony. (quotes Riley). Scient. Am. xvii. 6885.

1883. Egg, larva, pupa (figs.). Riley. Rep. U. S. Dept. Agri. 160. pl. xii.

1885. Egg, larva, pupa (figs.). Riley. Bull. U. S. Dept. Agri. 6, 7.

1886. Egg, larva, pupa (figs.). Buckhout. Rep. Penn. Bd. Agri. 214. pl. iii.

1888. Egg, larva, pupa (figs.). Lintner. 4th Rep. Nox. Ins. N. Y. 143.

1888. Egg, larva, pupa (figs.). Riley. Bull. No. 10. Div. Ent. 9.

1889. Egg, larva, pupa (figs.). Lintner. 5th Rep. Nox. Ins. N. Y. 235.

GALERUCA MARGINELLA Kby.

1869. Larva, pupa (figs.). Packard. Guide. 505.

GALERUCA SAGITTARÆ Gyll.

1883. Egg, larva, pupa. Schaupp. Bull. Bk. Ent. Soc. vi. 54.

BLEPHARIDA RHOIS Forst.

1874. Egg, larva, pupa (figs.). Riley. 6th Rep. Nox. Ins. Mo. 118-122.

1876. Larva. Thomas. 1st Rep. Nox. Ins. Ill. 167.

1889. Egg, larva, pupa (figs.). Fernald (after Riley). Ann. Rep. Exp. St. Mass. 10.

DISONYCHA COLLARIS Fabr.

Larva, pupa. Murtfeldt. Bull. No. 22. U. S. Div. Ent. 76.

HALTICA CHALYBEA Ill.

1854. Larva (brief). Harris. Rep. Ins. & Diseases Inj. Veget. 11 (Am. Pom. Soc.).

1866. Larva. Walsh. Pract. Ent. i. 40 (as *Grafftodera chalybea*).

1867. Larva (brief). Walsh. Pract. Ent. ii. 50.

1869. Larva (brief). Packard. Guide. 507 (as *Grafftodera chalybea*).

1876. Larva, pupa (figs.). Riley. 3rd Rep. Nox. Ins. Mo. 79-81.

1874. Larva (fig. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 173.

1876. Larva (fig.). Thomas (quotes Riley). 1st Rep. Nox. Ins. Ill. 170.

1877. Egg, larva (fig.). Gott. Rep. Ent. Soc. Ont. 45.

1878. Egg, larva, pupa (figs.). Perkins. 5th Rep. Vermont Bd. Agri. 282.

1880. Larva, pupa (figs.). Anony. Am. Ent. iii. 183.

1882. Larva, pupa (figs.). Harrington. Rep. Ent. Soc. Ont. 60.

1883. Larva, pupa (figs.). Saunders. Ins. Inj. Fruit. 278.

1888. Larva (fig. only). Lintner. 4th Rep. Nox. Ins. N. Y. 96.

HALTICA BIMARGINATA. Say.

1888. Larva, pupa. Lintner. 4th Rep. Inj. Ins. N. Y. 98.

HALTICA FOLIACEA Lec.

1887. Larva. Riley. Scient. Am. June 16 (as *G. punctipennis*).

1887. Larva. Riley. Gardner's Monthly. xxix. 216.

1888. Egg, young and mature larva. Murtfeldt. Insect Life, i. 74-76.

PHYLLOTRETA VITTATA Fabr.

1869. Larva, pupa (figs.). Shimer. Am. Nat. ii. 150 (as *H. striolata*).

1869. Larva, pupa (figs.). Packard (quotes Shimer). Guide. 507.

1869. Larva, pupa (figs.). Shimer. Am. Ent. i. 158 (as *H. striolata*).

1876. Larva. Thomas. 1st Rep. Nox. Ins. Ill. 169.
 1882. Larva, pupa (figs.). Harrington. Rep. Ent. Soc. Ont. 60.
 1883. Larva, pupa (figs.). Edge. Agri. Penn. 69.
 1883. Larva, pupa (figs.). Saunders. Ins. Inj. Fruit. 330.
 1884. Egg, larva, pupa. Riley. Rep. U. S. Dept. Agri. 301-304.

PHYLLOTRETA ZIMMERMANII Cr.

1884. Larva, pupa (figs.). Riley. Rep. U. S. Dept. Agri. 304-308. pl. iv.

DIBOLIA ÆREA Mels.

1879. Larva. Comstock. Rep. U. S. Dept. Agri. 248.

MICRORHOPALA VITTATA Fabr.

1837. Larva (figs.). Harris. Journ. Bost. Nat. Hist. Soc. i. 147.

ODONTOTA RUBRA Web.

1837. Larva, pupa (fig.). Harris. Journ. Bost. Nat. Hist. Soc. i. 143 (as *H. rosea*).
 1869. Larva, pupa. Packard (quotes Harris). Guide. 503.
 1883. Larva. Saunders. Ins. Inj. Fruit. 121.

ODONTOTA DORSALIS Thunb.

1837. Pupa (fig.). Harris. Journ. Bost. Nat. Hist. i. 146.
 1839. Pupa (fig.). Westwood. Intro. Ins. i. 379 (as *H. suturalis*).
 1868. Larva (brief). Walsh & Riley. Am. Ent. i. 58 (as *H. suturalis*).
 1880. Larva (brief). Chambers. Am. Ent. iii. 60 (as *H. suturalis*).
 1881. Larva (brief). Packard. Ins. Inj. For. & Sh. Tr. 100 (as *H. suturalis*).

PHYSONOTA UNIPUNCTATA Say.

1869. Larva. Walsh & Riley. Am. Ent. ii. 4 (as *P. 5-punctata*).
 1870. Larva (fig.) Riley. 2nd Rep. Nox. Ins. Mo. 59.
 1885. Larva (brief). Canfield. Can. Ent. xvi. 227.
 1885. Larva (brief). Hamilton. Can. Ent. xvi. 134.

CASSIDA BIVITTATA Say.

1865. Larva. Thomas. Trans. Ill. Agri. Soc. v. 433.
 1868. Larva. Riley. Prairie Farmer. Annual. 53.
 1869. Larva, pupa (figs.) Walsh & Riley. Am. Ent. i. 235.
 1870. Larva (fig.). Riley. 2nd Rep. Nox. Ins. Ill. 61.
 1874. Larva, pupa (figs. only) Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 175.
 1876. Larva, pupa (figs. only). Thomas. 1st Rep. Nox. Ins. Ill. 172.

CASSIDA NIGRIPES Oliv.

1869. Larva, pupa (figs.). Walsh & Riley. Am. Ent. i. 238.
 1870. Larva, pupa (figs.). Riley. 2nd Rep. Nox. Ins. Mo. 63.

COPTOCYCLA AURICHALCEA Fabr.

1841. Larva (brief). Harris. Inj. Ins. Mass. 98.
 1865. Larva (brief). Thomas. Trans. Ill. Agri. Soc. v. 433.

1869. Egg, larva, pupa (figs.). Walsh & Riley. Am. Ent. i. 237.
 1869. Larva (brief). Packard. Guide. 504.
 1870. Larva, pupa (figs.). Riley. 2nd Rep. Nox. Ins. Mo. 62.
 1882. Larva (brief). Harrington. Rep. Ent. Soc. Ont. 62.
 1890. Larva (brief). Lintner. 6th Rep. Inj. Ins. N. Y. 125, 126.

COPTOCYCLA GUTTATA Oliv.

1869. Egg, larva, pupa (figs.). Walsh & Riley. Am. Ent. i. 237.
 1870. Larva, pupa (figs.). Riley. 2nd Rep. Nox. Ins. Mo. 63.

CHELYMORPHA ARGUS Licht.

1869. Larva (fig.). Walsh & Riley. Am. Ent. ii. 4 (as *Ch. cribraria*).
 1869. Larva (brief), pupa (fig.). Packard. Guide. 504.
 1870. Pupa (fig.). Riley. 2nd Rep. Nox. Ins. Mo. 58.
 1877. Pupa (fig. only). Packard. Half Hours Ins.
 1882. Larva, pupa (brief). Harrington. Rep. Ent. Soc. Ont. 61.
 1883. Pupa (fig.). Saunders. Ins. Inj. Fruit. 315.

BRUCHIDÆ.

CARYOBORUS ARTHRITICUS Fabr.

1869. Larva (habits). Glover. Rep. U. S. Dept. Agri. 71 (1868).
 1881. Larva (habits). Dury. Can. Ent. xiii. 21.

BRUCHUS PISI Linn.

1761. Larva (notes). Kalm. Voy. to America. ii. 294.
 1775. Larva (notes). De Geer (quotes Kalm). Mem. v. 380.
 1815. Larva (notes). Kirby & Spence (quote Kalm). Intro. Ent. i. p.
 1839. Larva (notes). Westwood (quotes Kalm). Intro. Ins. i. 330.
 1841. Larva (habits). Harris. Inj. Ins. Mass. 56.
 1854. Larva (biological notes). Kollar. Vert. z. b. Ges. Wien. iv. 27-30.
 1854. Larva, pupa (des.). Letzner. Arb. Schles. Ges. Breslau. 79-82.
 1858. Larva (biological notes). Kollar. Vert. z. b. Ges. Wien. viii. 421-425.
 1862. Egg, larva, pupa (brief). Harris. Inj. Ins. Mass. 62.
 1863. Larva (fig.). Ogerien. Hist. Nat. Journ. iii. 403.
 1868. Larva (habits). Glover. Rep. U. S. Agri. Dept. 72.
 1870. Larva (fig.). Glover. Rep. U. S. Dept. Agri. 92.
 1871. Egg, larva, pupa (figs.). Riley. 3rd Rep. Nox. Ins. Mo. 44-50.
 1874. Larva (habits). Stefanelli. Bull. Ent. Ital. vi. p.
 1874. Egg, larva (brief). Thomas. 1st Rep. Nox. Ins. Ill. 28.
 1878. Egg, larva, pupa (figs.). Perkins. 5th Rep. Vermont Bd. Agri. 269.
 1879. Egg, larva (fig.). Saunders. Rep. Ent. Soc. Ont. 64.
 1880. Larva (fig. only). Bethune. Rep. Ent. Soc. Ont. 50.
 1883. Larva (fig.). Edge. Agri. Penn. 69.
 1887. Egg, larva. Fernald. Rep. Bd. Agri. Mass. 90.

BRUCHUS OBSOLETUS Say.

1871. Larva (habits). Riley. 3rd Rep. Nox. Ins. Mo. 52.
 1873. Larva (fig.). Packard. 3rd Rep. Inj. Ins. Mass. 15 (1872. as
Bruchus fabæ).
 1873. Larva (fig.). Packard. Am. Nat. vii. 537 (as *Bruchus fabæ*).

TENEBRIONIDÆ.

ELEODES DENTIPES Esch.

1878. Larva (fig.). Gissler. Bull. Bk. Ent. Soc. i. 19, 87.

ELEODES GIGANTEA Mann.

1878. Egg, larva (fig.). Gissler. Bull. Bk. Ent. Soc. i. 18, 87.

BLAPS MORTISAGA Linn.

1838. Larva. Patterson. Trans. Ent. Soc. Lond. ii. 99.
 1839. Larva (fig. only). Westwood. Intro. Ins. t. 321.
 1878. Larva (brief). Gissler. Bull. Bk. Ent. Soc. i. 87.
 (This species is, perhaps, erroneously placed in our Catalogue.)

SCOTOBATES CALCARATUS Fabr.

1883. Larva (brief). Coquillett. Can. Ent. xv. 102.
 1890. Larva, pupa. Beutenmüller. Psyche. vi.

XYLOPINUS SAPERDIOIDES Oliv.

1878. Larva (brief). Gissler. Bull. Bk. Ent. Soc. i. 87.

TENEBRIO MOLITOR Linn.

1720. Larva, pupa (figs.). Frisch. Beschreib. All. Ins. pt. 3. pl. i.
 1775. Larva (fig.). De Geer. Mem. v. M. 1. 35. pl. ii. figs. 6-11.
 1795. Larva. Oliver. Entomol. iv. No. 57.
 1796. Larva. Gœze. Belehr 35-67.
 1802. Larva. Latreille. Hist. Nat. Crust. & Ins. x. 289.
 1804. Larva (anatomy). Posselt. Beitr. Anatom. Ins. 25. pl. iii.
 1807. Larva, pupa (figs.). Sturm. Deutschl. Ins. ii. 220-223.
 1833. Larva, pupa (figs.). Hammerschmidt. Beitr. Ent. pl. vi.
 1839. Larva. Westwood. Intro. Ins. i. 317.
 1854. Larva. Mulsant. Nat. Hist. Col. Fr. Latig. 281.
 1853. Larva. Hagen. Stett. Ent. Zeit. xiv. 56.
 1868. Larva, pupa (brief). Glover. Rep. U. S. Pat. Off. (Agri.) 100.
 1869. Larva (brief). Packard. Guide. 474.
 1872. Larva (fig.). Figuiet. Ins. World. 499.
 1878. Larva, pupa (figs.). Schiedte. Naturh. Tidsskr. xi. pl. i.
 1874. Larva (brief). Le Baron. 4th Rep. Nox. Ins. Ill. 121.
 1883. Larva (fig. only). Calwer. Käferbuch. 585. pl. xlix. fig. 14.

TENEBRIO OBSCURUS Fabr.

1839. Larva (brief). Westwood. Intro. Ins. i. 318.

1854. Larva (Developments). Mulsant. Nat. Hist. Col. Fr. Latig. 186.
 1874. Larva, pupa (fig.). Le Baron (after Riley). 4th Rep. Nox. Ins. III.
 123.
 1878. Larva (brief). Gissler. Bull. Bk. Ent. Soc. i. 87.

TRIBOLIUM FERRUGINEUM Fabr.

1839. Larva (fig.). Westwood. Intro. Ins. i. 319.
 1854. Larva. Lucas. Ann. Soc. Ent. Fr. iii. 2. Bull. 51.
 1855. Larva, pupa (figs.). Lucas. Ann. Soc. Ent. Fr. iii. 3. 249-259. pl.
 xiii. No. 3.
 1878. Larva. Schiødte. Nat. Tidsskr. xi. p.
 1885. Larva (fig.). Lintner. 2nd Rep. Inj. Ins. N. Y. 137.

GNATHOCERUS CORNUTUS Fabr.

1845. Larva, pupa (figs.). Motschulsky. Bull. Soc. Nat. Moscow. i. 80.
 1854. Larva. Motschulsky. Etudes. Ent. iii. 67.
 1870. Larva, pupa (figs.). Gernet. Horæ Soc. Ent. Ross. vi. 11. pl. ii.
 1874. Larva, pupa (figs.). Letzner. Arb. Schles. Ges. Breslau. 166-168.
 1878. Larva (brief). Gissler. Bull. Bk. Ent. Soc. i. 87.

DIAPERIS HYDNI Fabr.

1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox Ins.
 III. 125.
 1880. Larva (brief). Harrington. Can. Ent. xii. 261.

PLATYDEMA EXCAVATUM Say.

1878. Larva (brief). Gissler. Bull. Bk. Ent. Soc. i. 87.

BOLETOTHERUS BIFURCUS Fabr.

1869. Larva, pupa (figs.). Packard. Guide. 474.
 1878. Larva (brief). Gissler. Bull. Bk. Ent. Soc. i. 87.
 1882. Larva, pupa. Hayward. Journ. Bost. Zoo. Soc. i. 35, 36.

ÆGIALITIDÆ.

ÆGIALITES DEBILIS Mann.

1888. Larva (fig.). Horn. Trans. Am. Ent. Soc. xv. pl. iii.

CISTELIDÆ.

ANDROCHIRUS FUSCIPES Mels.

1883. Larva. Coquillett. Can. Ent. xv. 101.

OTHNIIDÆ.

OTHNIUS LUGUBRIS Horn.

1888. Larva (fig.). Horn. Trans. Am. Ent. Soc. xv. pl. iii.

MELANDRYIDÆ.

XYLITA LÆVIGATA Hellw.

1842. Larva. Erichson. Wieg. Archiv. viii. pl. 1. 368.

1855. Larva, pupa (figs.). Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 248.

CEDEMERIDÆ.

NACERDES MELANURA Linn.

1861. Larva, pupa (figs.). Herklotz. Tidsskr. Ent. iv. 164-166. pl. xi.
 1863. Larva, pupa (figs.). Perris. Hist. Pin. Mar. i. 452
 1877. Larva. Perris. Larves des Col. 350.
 1880. Egg, larva. Moody. Psyche. iii. 68.
 1880. Larva (figs.). Schiœdte. Naturh. Tidsskr. xii. pl. xvii.

MORDELLIDÆ.

MORDELLA 8-PUNCTATA Fabr.

1874. Larva, pupa (figs.). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 114.

MORDELLA ? Sp.

1881. Larva (note). Chambers. Can. Ent. xiii. 173.

ANTHICIDÆ.

ANTHICUS FLORALIS Linn.

1883. Larva. Rey. Ann. Soc. Linn. Lyon. new ser. xxix. 141, 142.

PYROCHROIDÆ.

PYROCHROA FLABELLATA Fabr.

1880. Larva. Moody. Psyche. iii. 76.

SCHIZOTUS CERVICALIS Newm.

1880. Larva (brief). Moody. Psyche. iii. 76.

DENDROIDES CANADENSIS Lat.

1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 117.
 1880. Larva. Moody. Psyche. iii. 76.

DENDROIDES CONCOLOR Newm.

1880. Larva. Moody. Psyche. iii. 76.

MELOIDÆ.

MELOE sp. (probably *M. angusticollis*).

1862. Larva. Packard. 2nd Rep. Nat. Hist. & Geo. Surv. Maine. 190.
 1869. Larva (fig.). Packard. Guide. 478.
 1869. Larva (fig.). Packard. Am. Nat. ii. 199. pl. iv.
 1874. Larva (fig. only). Le Baron (after Packard). 4th Rep. Nox. Ins. Ill. 114.
 1876. Larva (fig.). Saunders. Rep. Ent. Soc. Ont. 27.
 1878. Larva (fig.). Riley. Am. Nat. xii. 216.
 1878. Larva (fig.). Riley. 1st Rep. U. S. Ent. Com. 259.

1880. Larva, pupa. Packard. Zoology. 373 (2nd Ed.).
 1883. Larva, pupa (figs.). Packard. Am. Nat. xvii. 941

HORIA MACULATA Swed.

1825. Larva (fig.). Guilding. Trans. Linn. Soc. Lond. xiv. 316. pl. viii.

EPICAUTA CINEREA Forst.

1841. Larva (brief). Harris. Inj. Ins. Mass. 112.
 1878. Pupa (fig.). Riley. Am. Nat. xii. pl. i. fig. 9.

EPICAUTA VITTATA Fabr.

1876. Egg, larva. Saunders (quotes Riley). Rep. Ent. Soc. Ont. 29.
 1878. Egg, larva, pupa (figs.). Riley. Am. Nat. xii. 285. pl. i.
 1878. Egg, larva, pupa (figs.). Riley. 1st Rep. U. S. Ent. Com. 298-300
 pl. iv.
 1890. Larval habits. Lintner. 6th Rep. Inj. Ins. N. Y. 132-134.

HORNIA MINUTIPENNIS Riley.

1878. Larva (fig.). Riley. Am. Nat. xii. 218. pl. i. figs. 3a, 13c.
 1878. Egg, larva (fig.). Riley. 1st Rep. U. S. Ent. Com. 296. pl. iv.

STYLOPIDÆ.

STYLOPS CHILDRENI Gray.

1869. Larva (fig.). Packard. Guide. 482.
 1869. Larva (fig.). Packard. Am. Nat. ii. 201. pl. v. fig. 6.

ATTELABIDÆ.

ATTELABUS BIPUSTULATUS Fabr.

1881. Larva, pupa. Packard (quotes Murtfeldt). Ins. Inj. For. & Sh. Tr.
 51.

OTIORHYNCHIDÆ.

OTIORHYNCHUS SULCATUS Fabr.

1834. Larva (fig.). Bouche. Nat. Ins. 201. pl. x. figs. 15-20.
 1837. Larva, pupa (figs.). Westwood. Gard. Mag. xiii. 157.
 1839. Larva, pupa (figs.). Westwood. Intro. Ins. i. 344.
 1849. Larva (brief). Preston. Gardner's Chron. 744.
 1869. Larva (brief). Lucas. Ann. Soc. Ent. Fr. iv. 9. 50.
 1876. Larva. Snellen. Tijdsskr. Ent. xix. 210.
 1879. Larva, pupa (figs.). Orinierod. Inj. Ins. 6.
 1884. Larva (brief). Forbes. 2d Rep. Nox. Ins. Ill. 177.

OTIORHYNCHUS OVATUS Linn.

1853. Larva (notes). Laboulbene. Ann. Soc. Ent. Fr. iii. 1. Bull. 48.

ARAMIGUS FULLERI Horn.

1878. Egg, larva, pupa (figs.). Riley. Rep. U. S. Dept. Agri. 256, 257.
 pl. vii.
 1885. Egg, larva, pupa (figs.). Lintner. 2d Ann. Rep. Inj. Ins. 143.

CURCULIONIDÆ.

1890. Food-Habits. Beutenmüller. Can. Ent. xxii. p.

SITONES HISPIDULUS Germ.

1876. Larva, pupa. Brischke. Ent. Monatblatt. 42.

ITHYCERUS NOVEBORACENSIS Forst.

1868. Larva (fig.). Walsh & Riley. Am. Ent. i. 221.

1869. Larva, pupa (figs.). Walsh & Riley. Am. Ent. ii. 26.

1871. Larva. Riley. 3d Rep. Nox. Ins. Mo. 57.

1874. Larva (fig. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 136.

1876. Larva (fig.). Thomas. 1st Rep. Nox. Ins. Ill.

1883. Larva (fig.). Saunders. Ins. Inj. Fruit. 196.

PODAPION GALLICOLA Riley.

1883. Larva (brief). Riley. Bull. Bk. Ent. Soc. iv. 62.

1887. Larva (brief). Fletcher. Rep. Ent. Exp. Farms. 39.

LISTRONOTUS LATIUSCULUS, Boh.

1890. Larva, pupa (figs.). Weed. Bull. Ohio Exp. St. i. 10, 11. pl. ii. fig. 1.

PHYTONOMUS PUNCTATUS Fabr.

1881. Egg, larva. Riley. Am. Nat. xv. 12.

1882. Egg, larva, pupa (figs.). Riley. Rep. U. S. Dept. Agri. 171-179. pl. x.

1882. Egg, larva, pupa (figs.). Lintner. 1st Rep. Inj. Ins. N. Y. 250.

1884. Egg, larva, pupa (figs.). Cutting. 8th Rep. Vermont Bd. Agri. 271, 272.

1884. Larva, pupa (figs.). Buckhaut. Agricul. Penn. 216.

1887. Egg, larva, pupa (figs.). Cook (quotes Riley). Beal's Grasses N. Am. i. 380-383.

PISSODES STROBI Peck.

1817. Larva. Peck. Mass. Agricul. Reposit. iv. 205-211. pl. i.

1825. Larva. Peck. Zoo. Journ. ii. 490-492.

1841. Larva (brief). Harris. Inj. Ins. Mass. 64.

1858. Larva. Fitch. 4th Rep. Nox. Ins. (Trans. N. Y. Agri. Soc.) 732-736 (1857).

1869. Larva (brief). Glover. Rep. U. S. Dept. Agri. 71 (1868).

1869. Larva, pupa (figs.). Riley. Am. Ent. ii. 164.

1869. Larva, pupa (figs.). Packard. Guide. 486.

1874. Larva, pupa (figs.). Le Baron (after Packard). 4th Rep. Nox. Ins. Ill. 139.

1876. Larva, pupa (figs.). Thomas. 1st Rep. Nox. Ins. Ill. 133.

1877. Larva, pupa (figs. only). Packard. Half Hours Ins. 299.

1877. Larva, pupa (figs.). Cook. 16th Rep. Mich. Bd. Agricul. 251.

1880. Larva, pupa (figs.). Fuller. Am. Ent. iii. 5.

1880. Larva, pupa (figs. only). Packard. Zoology. 372. 2nd Ed.

1881. Larva, pupa (figs.). Packard. Ins. Inj. For. & Sh. Tr. 187.

1882. Larva, pupa (figs.). Packard. 3rd Rep. U. S. Ent. Com. pl. xiii.
 1883. Larva (brief). Saunders. Rep. Ent. Soc. Ont. 55.
 1885. Larva, pupa (figs.). Packard. Rep. U. S. Dept. Agri. 322-325.
 1886. Larva, pupa (figs.). Buckhaut. Agricul. Penn. 214. pl. iii.
 1888. Larva, pupa (figs.). Lintner. 4th Rep. Inj. Ins. N. Y. 24.
 1889. Larva, pupa (figs.). Smith. Garden & Forest. ii. p.

HYLOBIUS PALES Hbst.

1841. Larva (brief). Harris. Inj. Ins. Mass. 62.
 1883. Larva (brief). Saunders. Rep. Ent. Soc. Ont. 55.

LIXUS CONCAVUS Say.

1889. Egg, larva, pupa. Webster. Ent. Am. v. 13-16.
 1890. Egg, larva, pupa (figs.). Weed. Bull. Ohio Ex. St. iii. No. 8. 2nd Ser. 232.
 1890. Larva, pupa (figs.). Weed. Journ. Col. Hort. Soc. v. 73.

LIXUS MACER Lec.

1883. Egg, larva (brief). Coquillett. Can. Ent. xv. 113.
 1889. Egg, larva, pupa (Biolog. notes). Webster. Ent. Am. v. 11.

LIXUS PARCUS Lec.

1881. Biological Notes. Riley. Proc. Ent. Soc. Wash. i. 33.

LISSORHOPTRUS SIMPLEX Say.

1882. Larva (fig.). Riley. Rep. U. S. Dept. Agri. 132. pl. vi. fig. 4.

MAGDALIS OLYRA Hbst.

1869. Larva, pupa (figs.). Packard. Guide. 488.
 1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th. Rep. Nox. Ins. Ill. 139.
 1876. Larva, pupa (fig. only). Thomas. 1st Rep. Nox. Ins. Ill. 132.
 1877. Larva, pupa (figs. only). Packard. Half Hours Ins. 241.
 1881. Larva, pupa (figs.). Packard. Ins. Inj. For. & Sh. Tr. 28.
 1884. Larva (brief). Bowditch. Journ. Bost. Zoo. Soc. iii. 6.

MAGDALIS ARMICOLLIS Say.

1875. Larva, pupa (brief). Hubbard. Psyche. i. 6 (1875).

ANTHONOMUS 4-GIBBUS Say.

1871. Egg, larva, pupa (figs.). Riley. 3rd Rep. Nox. Ins. Mo. 29-35.
 1874. Larva, pupa (figs.). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 141.
 1876. Egg, larva. Thomas. 1st Rep. Nox. Ins. Ill. 135.
 1883. Larva, pupa (figs.). Saunders. Ins. Inj. Fruit. 134.

ANTHONOMUS SUTURALIS Lec.

1869. Larva. Packard. Guide. 488.
 1883. Larva (fig.). Saunders. Ins. Inj. Fruit. 375.

COCCOTORUS SCUTELLARIS Lec.

1871. Larva (brief). Riley. 3rd Rep. Nox. Ins. Mo. 39.
 1876. Larva (brief). Thomas. 1st Rep. Nox. Ins. Ill. 136 (as *Anthonomus prunicida*).
 1883. Larva (brief). Saunders. Ins. Inj. Fruit. 188.
 1888. Egg, larva (brief). Bruner. Insect Life. i. p.

CIONUS SCROPHULARIÆ Linn.

1775. Larva (fig.). De Geer. Mem. v. p.
 1779. Larva (fig.). Schaeffer. Abhandl. Ins. iii. pl. ix.
 1790. Larva (habits). Rossi. Fauna Etrusca. 121.
 1795. Larva (brief). Herbst. Nat. Syot. vi. 184.
 1803. Larva, pupa (brief). Latreille. Nat. Hist. Crust. & Ins. xi. 72.
 1843. Larva. Huber. Mem. Soc. Sc. Phys. & Nat. Hist. Geneve. x. 15-34.
 1849. Larva. Westwood. Gardner's Chronicle. 228.
 1850. Larva. Perris. Ann. Soc. Linn. Lyon. ii. 291.
 1853. Larva. Letzner. Arb. Schles. Ges. Breslau. 177.
 1879. Larva. Osborne. Ent. Month. Mag. xvi. 18.

GYMNETRON TETER Fabr.

1859. Larva, pupa (figs.). Heeger. Sitzb. Ak. Wiss. Wien. 218-221. pl. iii.
 1874. Larva, pupa. Kaltenbach (quotes Heeger). Pflanzen feinde. 465.

CONOTRACHELUS NENUPHAR Hbst.

1841. Larva (brief). Harris. Inj. Ins. Mass. 66.
 1854. Larva (fig.). Glover. Rep. U. S. Pat. Off. (Agri.) 81. pl. vii.
 1861. Larva (fig.). Rathvon. Rep. U. S. Pat. Off. (Agri.) 605.
 1862. Larva (brief). Harris. Inj. Ins. 76.
 1865. Larva, pupa (figs.). Trimble. Ins. Enemies Fruit. 33. pl. vi.
 1869. Larva, pupa (figs.). Packard. Guide. 489.
 1870. Larva, pupa (figs.). Saunders. Can. Ent. ii. 137.
 1870. Larva, pupa (figs.). Riley. Am. Ent. ii. 130.
 1871. Larva, pupa (figs.). Saunders. Can. Ent. iii. 26.
 1871. Eggs, larva, pupa (figs.). Riley. 3rd Rep. Nox. Ins. Mo. 11.
 1873. Larva, pupa (figs.). Cook. 12th Rep. Mich. Bd. Agri. 132.
 1874. Larva, pupa (figs.). Le Baron. 4th Rep. Nox. Ins. Ill. 142.
 1876. Egg, larva, pupa (figs.). Thomas. 1st Rep. Nox. Ins. Ill. 138.
 1877. Larva, pupa (figs.). Gott. Rep. Ent. Soc. Ont. 46.
 1877. Larva, pupa (figs.). Packard. Half Hours Ins. 273.
 1879. Larva, pupa (figs.). Gott. Rep. Ent. Soc. Ont. 84.
 1880. Larva, pupa (figs.). Harrington. Rep. Ent. Soc. Ont. 53.
 1881. Larva, pupa (figs.). Chase. Trans. Wis. Agri. Soc. xix. 452.
 1883. Egg, larva, pupa (figs.). Saunders. Ins. Inj. Fruit. 181.
 1885. Larva, pupa (figs.). Fletcher. Rep. Ent. Exp. Farms. 25.

CONOTRACHELUS CRATÆGI Walsh.

1871. Larva, pupa (figs.). Riley. 3d Rep. Nox. Ins. Mo. 35-39.
 1876. Larva (brief). Thomas. 1st Rep. Nox. Ins. Ill. 141.
 1883. Larva (brief). Saunders. Ins. Inj. Fruit. 226.

RHYSEMATUS LINEATICOLLIS Say.

1889. Larva (brief). Webster. Insect Life. ii. 112.

TYLODERMA FOVEOLATUM Say.

1889. Egg, larva (brief). Webster. Insect Life. ii. 111.

TYLODERMA FRAGARÆ Riley.

1871. Larva (fig.). Riley. 3rd Rep. Nox. Ins. Mo. 42.
 1872. Larva (fig. only). Anony. (after Riley). Am. Nat. vi. 293.
 1874. Larva (fig. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 143.
 1880. Larva (fig.). Harrington. Rep. Ent. Soc. Ont. 54.
 1880. Larva (fig. only). Fuller. Am. Ent. iii. 110.
 1883. Larva, pupa (figs.). Forbes. Trans. Wis. Hort. Soc. xiii.
 1883. Larva, pupa (figs.). Forbes. 1st Rep. Nox. Ins. Ill. 64.
 1883. Larva (fig.). Saunders. Ins. Inj. Fruit. 323.
 1884. Larva (fig.). Forbes. 2nd Rep. Nox. Ins. Ill. 142. pl. ix.
 1889. Egg. Webster. Ins. Life. ii. 110.

CRYPTORHYNCHUS PAROCHUS Hbst.

1881. Larva, pupa (brief). Schaupp. Bull. Bk. Ent. Soc. iv. 35.

CRYPTORHYNCHUS LAPATHI Linn.

1791. Larva, pupa (figs.). Curtis. Trans. Linn. Soc. Lond. i. 86-89. pl. v.
 1793. Larva, pupa (figs.). Reiche (quotes Curtis). Mag. Thier. i. 11-14. pl. i.
 1854. Larva, pupa (figs.). Loudon. Arbor. Britan. 1479 (2d Ed.).
 1863. Larva, pupa (biolog. notes). Westwood. Trans. Ent. Soc. Lond. Pro. 65.
 1864. Larva, pupa (figs.). Westwood. Gardner's Chron. Jan. 16th.
 1867. Larva (biolog. notes). Goureau. Ann. Soc. Ent. Fr. iv. 7. Bull. 85.
 1868. Larva, pupa (figs.). Ratzeburg. Die Waldverderbuiss. ii. 247. pl. xlix.
 1873. Larva. Erne. Mitth. Schweiz. Ent. Ges. iv. 138.

CRAPONIUS INÆQUALIS Say.

1869. Larva, pupa (brief). Glover. Rep. U. S. Agri. 76 (1868).
 1869. Larva (fig.). Packard. Guide. 490.

CEUTORHYNCHUS CYANIPENNIS Grm.

1845. Biolog. Notes. Guerin Meneville. Ann. Soc. Ent. Fr. ii. 3. Bull. 33.
 1855. Biolog. Notes. Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 562.
 1855. Larva. Haimhoffer. Verh. z. b. Ges. Wien. v. 525-529.
 1865. Larva (fig.). Taschenberg. Schädl. Insect. 57-59. pl. ii. fig. 11.
 1866. Larva, pupa (figs.). Kessler. Lebengeschichte. 3-25.

1874. Larva. Kaltenbach. Pflanzen feinde. 31.
 1874. Larva. Nowicki. Verh. z. b. Ges. Wien. xxiv. 364.

BARIDIUS TRINOTATUS.

1841. Larva (brief). Harris. Inj. Ins. Mass.
 1862. Larva (brief). Harris. Inj. Ins. Mass. 81.
 1868. Larva, pupa (figs.). Walsh & Riley. Am. Ent. i. 22.
 1869. Larva, pupa (figs.). Packard. Guide. 491.
 1870. Larva (brief). Compton. Prize Ess. Cult. Potato. 20.
 1876. Larva (brief). Thomas. 1st Rep. Nox. Ins. Ill. 142.
 1880. Larva, pupa (figs.). Harrington. Rep. Ent. Soc. Ont. 56.

BALANINUS NASICUS Say.

1861. Larva (fig.). Rathvon. Rep. U. S. Pat. Off. 605 (as *B. Sayi*).

BALANINUS CARYATRYPES Boh.

1872. Larva (fig.). Packard. 2d Ann. Rep. Inj. Ins. Mass. 17.
 1877. Larva (fig.). Packard. Half Hours Ins. 247 (as Chestnut weevil).
 1881. Larva (fig.). Packard. Ins. Inj. For. & Sh. Tr. 93.

BRENTHIDÆ.

CYLAS FORMICARIUS Fabr.

1879. Egg, larva, pupa. Comstock. Rep. U. S. Dept. Agri. 250.

EUPSALIS MINUTA Dr.

1841. Larva, pupa (brief). Harris. Inj. Ins. Mass. 60 (as *B. septentrionalis*).
 1855. Larva (brief). Chapuis et Candeze (quotes Harris). Mem. Soc. Sc. Liege. viii. 546.
 1862. Larva, pupa. Harris. Inj. Ins. Mass. 63-69 (as *B. septentrionalis*).
 1874. Larva, pupa (figs.). Riley. 6th Rep. Nox. Ins. Mo. 113-118.
 1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox. Ins. Ill. 130.
 1881. Larva, pupa (figs.). Packard (quotes Riley). Ins. Inj. For. & Sh. Tr. 22.
 1887. Larva, pupa (figs.). Harrington. Rep. Ent. Soc. Ont. 32.

CALANDRIDÆ.

RHYNCHOPHORUS CRUENTATUS Fabr.

1873. Larva, pupa, cocoon. Summers. Can. Ent. v. 123 (as *R. Zimmermanni*).
 1878. Larva (brief). Horn. Trans. Am. Ent. Soc. vii. 39.

RHYNCHOPHORUS PALMARUM Linn.

1705. Larva (fig.). Marian. Insects Surinam. 48. pl. xlviij.
 1796. Larva (fig.). Stedman. Exped. South Am. ii. 22. pl. (as Palmetto weevil).
 1803. Larva (brief). Latreille. Hist. Nat. Crust. & Ins. xi. 54.
 1806. Larva, pupa (fig.). Shaw. Gen. Zoology Ins. pt. i. 62. pl. xx (as *Curculio palmarum*).

1832. Larva, pupa, cocoon (figs. only). J. D. Mag. Nat. Hist. v. 466 (as *Calandra palmarum*).

1845. Larva, pupa (figs.). Blanchard. Hist. des Insects. pl. x.

SPHENOPHORUS PARVULUS Gyll.

1886. Larva. Forbes. Misc. Essays. 22 (Trans. Agri. Soc. Ill. 1885).

Larva (brief). Brunner. Bull. No. 22. U. S. Div. Ent. 99.

1890. Larva. Forbes. 16th Rep. Nox. & Ben. Ins. Ill. 67 (1887-88).

SPHENOPHORUS ROBUSTUS Horn.

1882. Larva, pupa (figs.). Riley. Rep. U. S. Dept. Agri. 141-142. pl. viii.

SPHENOPHORUS OCHREUS Lec.

1889. Larva (fig.). Webster. Ins. Life. ii. 132-134.

1890. Larva (fig.). Webster. Bull. No. 22. Div. Ent. 53.

1890. Larva. Forbes. 16th Rep. Nox. & Ben. Ins. Ill. 66 (1887-88).

CALANDRA GRANARIA Linn.

1778. Larva. DeGeer. Mem. v. 360.

1795. Larva. Herbst. Natur. System. vi. 15.

1798. Larva (habits). Geoffroy. Hist. Abr. Ins. i. 285.

1803. Larva, pupa. Latreille. Hist. Nat. Crust. & Ins. xi. 54.

1834. Larva, pupa (figs.). Kerstenstein. Silberm. Rev. Ent. ii. 115-120.

1841. Larva (Biolog. notes). Harris. Inj. Ins. Mass. 70.

1842. Larva, pupa. Kollar. Verh. Landw. Ges. Wien. N. F. i. 139-145.

1846. Larva, pupa. Curtis. Journ. Roy. Agri. Soc. Eng. pt. 1. 97.

1854. Larva, pupa (figs.). Emmons. Ins. N. Y. 102. pl. ii.

1855. Larva, pupa (figs.). Nordlinger. Kl. Feinde. 153-163.

1869. Larva, pupa (figs.). Packard. Guide. 490.

1870. Larva. Westwood. Trans. Ent. Soc. Lond. Proc. 16.

1879. Larva. Fitch. The Entomologist. 41.

1879. Larva. Ormerod. The Entomologist. 51-54.

CALANDRA ORYZÆ Linn.

1841. Larva, (brief). Harris. Inj. Ins. Mass. 70.

1846. Pupa, (fig.). Curtis. Journ. Roy. Agri. Soc. pt. 1. 95.

1848. Larva, pupa. Kollar. Sitzb. Wien. Acad. v. 3.

1854. Larva, pupa (figs.). Glover. Rep. U. S. Pat. Off. 75.

1855. Biological Notes. Rogers. Stett. Ent. Zeit. xvi. 307.

1879. Larva. Fitch. The Entomologist. Feb.

PHLÆOPHAGUS SPADIX Hbst.

1888. Larva (brief). Jülich. Ent. Am. iv. 35.

SCOLYTIDÆ.

PITYOPHTHORUS CONSIMILIS Lec.

Habits. Schwarz. Proc. Ent. Soc. Wash. i. 164.

PITYOPHTHORUS CENTRALIS Eich.

Biological Notes. Schwarz. Proc. Ent. Soc. Wash. i. 163.

PITYOPHTHORUS ANNECTENS Lec.

- Biological Notes. Schwarz. Proc. Ent. Soc. Wash. i. 164.
1877. Larvæ. Perris. Larves des Coleopt. 412.

HYPOTHENEMUS ERUDITUS Westw.

1885. Egg, larva, pupa. Hubbard. Ins. Aff. Orange. 173.

XYLOTERUS BIVITTATUS Kby.

1882. Larva, pupa (figs. only). Packard. 3d Rep. U. S. Ent. Com. pl. xiv
figs. 1, 1 a.

XYLEBORUS CÆLATUS Eich.

1882. Larva, pupa (figs. only). Packard. 3d Rep. U. S. Ent. Com. pl. xiv.
figs. 2, 3.

XYLEBORUS XYLOGRAPHUS Say.

1857. Egg, larva, pupa. Fitch. 4th. Rep. Nox. Ins. 720 (Trans. N. Y.
Agri. Soc.).
1881. Egg, larva, pupa. Packard. Ins. Inj. For. & Sh. Tr. 165.

XYLEBORUS PYRI Peck.

1819. Larva (biol. notes). Peck. Mass. Agri. Rep. v. 307-313.
1826. Larva (biol.). Peck. Zoo. Journ. 387-402.
1841. Larvæ (notes). Harris. Inj. Ins. Mass. 75.
1889. Biological notes. Schwarz. Proc. Ent. Soc. Wash. i. 138.

DRYOCETES AFFABER Mann.

1881. Larva, pupa (figs.). Packard. Ins. Inj. For. & Sh. Tr. 243.

TOMICUS PINI Say.

1858. Fig. of Galleries. Fitch. 4th Rep. Nox. Ins. 722 (Trans. N. Y.
Agri. Soc. 1857).
1881. Pupa (fig.). Packard. Ins. Inj. For. & Sh. Tr. 169.

TOMICUS CALLIGRAPHUS Germ.

1858. Burrows. Fitch. 4th Rep. Nox. Ins. 721 (Trans. N. Y. Agri. Soc.
1857).

SCOLYTUS 4-SPINOSUS Say.

1873. Larva, pupa (figs.). Riley. 5th Rep. Nox. Ins. Mo. 103-108.
1874. Larva, pupa (figs. only). Le Baron (after Riley). 4th Rep. Nox. Ins.
Ill. 146.
1876. Larva, pupa (figs. only). Thomas (after Riley). 1st Rep. Nox. Ins.
Ill. 145.
1881. Larva, pupa (figs.). Packard (after Riley). Ins. Inj. For. & Sh.
Tr. 73.

SCOLYTUS UNISPINOSUS Lec.

1886. Larva (borings). Smith. Ent. Am. ii. 125.

SCOLYTUS RUGULOSUS Ratz.

1837. Larva (biol. notes). Ratzeburg. Forst. Insect. i. 185.
 1884. Larva (habits). Hagen. Can. Ent. xvi. 161.
 1855. Larva (biol. notes). Nördlinger. Kleine Feinde. 187.
 1867. Larva (biol. notes). Goureaux. Ins. Nuis. aux Forêts. 97.
 1886. Larva (habits, etc.). Scudder. Can. Ent. xviii. 195.
 1888. Larva (biolog. notes). Lintner. 4th Rep. Inj. Ins. N. York. 103-107.

HYLESINUS TRIFOLII Müll.

1807. Larva (biol. notes). Müller. Avis sur. une spece de Bostriche. 64.
 1844. Larva. Schmitt. Ent. Zeit. Stett. v. 389-397.
 1879. Larva, pupa (figs.). Riley. Rep. U. S. Dept. Agri. 248. pl. v. (1878).
 1880. Egg, larva, pupa (figs.). Anony. Am. Ent. iii. 180.
 1881. Larva, pupa (figs.). Lintner. Rep. N. Y. Agri. Soc. 16 (1880).
 1881. Larva, pupa (figs.). Saunders. Rep. Ent. Soc. Ont. 43.
 1881. Egg, larva, pupa (figs.). Chase. Trans. Wis. Agri. Soc. xix. 465
 (1880-81).
 1884. Larva, pupa (figs.). Buckhout. Agricul. Penn. 215.
 1887. Larva, pupa (figs.). Cook. Beal's Grasses N. Am. i. 375-378.

DENDROCTONOUS TEREBRANS Oliv.

1841. Larva (brief). Harris. Inj. Ins. Mass. 72.
 1857. Larva (brief). Fitch. Rep. Nox. Ins. N. Y. 728 (Trans. N. Y.
 Agri. Soc. 1858).
 1876. Larva (brief). Thomas. 1st Rep. Nox. Ins. Ill. 146.
 1881. Larva (brief). Packard. Ins. Inj. For. & Sh. Tr. 175.

CRYPTURGUS ATOMUS Lec.

1882. Larva, pupa (figs. only). Packard. 3rd Rep. U. S. Ent. Com. pl.
 xiv. figs. 4, 5.

HYLURGOPS PINIFEX Fitch.

1882. Larva (fig.) Packard. 3rd Rep. U. S. Ent. Com. pl. xiii. fig. 4

PHLÆOSINUS DENTATUS Say.

1858. Borings. Fitch. 4th Rep. Nox. Ins. 750 (Trans. N. Y. Agri. Soc.
 1857).

ANTHRIBIDÆ.

CRATOPARIS LUNATUS Fabr.

1855. Larva. Chapuis et Candeze. Mem. Soc. Sc. Liege. viii. 540.